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## Original Articles.

### THE DIAGNOSIS OF CHRONIC INDURATIVE OR INTERSTITIAL NEPHRITIS.*


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Discussing so trite a subject as the diagnosis of chronic indurative or interstitial nephritis, one can scarcely do more than emphasize the importance of certain pathologic and clinical features of the disease—features that have significant diagnostic, prognostic and therapeutic bearings. It is impossible to add anything new to our knowledge of the subject. Indeed, as a matter of fact, we at this day are scarcely better informed on the subject than was Bright himself. It is true that Aetius (died 367 A. D.), Avicenna (980-1036), and Van Helmont (1577-1644) attributed certain cases of dropsy to disease of the kidneys, and that Cotunnius (1736-1822), in 1770, discovered that the urine of dropsical patients is coagulable by heating, but our first insight into the true nature of the nonsuppurative diseases of the kidneys was furnished by Richard Bright (1789-1858) in his memorable publications in 1827 and subsequently. It is also true that Wells (1757-1817), in 1806, Blackall (1771-1860), in 1813, and Alison (1790-1859), in 1820, anticipated somewhat the observations of Bright, but the reports of these writers were fragmentary and their reasoning in large part erroneous. Bright, however, recognized the dependence of the symptoms, dropsy and albuminuria, on the lesions in the kidneys, which he described accurately; further, he recognized that although albuminuria and dropsy are the characteristic symptoms of certain diseases of the kidneys, in some cases the amount of albumin may be small and the dropsy slight or altogether absent, and he described many of the associated phenomena, such as uremia and the cardiovascular changes, and many of the complications, such as blindness, apoplexy, inflammation of the serous membranes, etc. Indeed, to those interested in the subject the original papers of Bright are a constant source of delight.

In view of the dependence of the diagnosis of chronic indurative or interstitial nephritis on changes in the urine and in the cardiovascular apparatus, preliminary reference may be made to the differential diagnosis of albuminuria, especially to the disorders associated with slight amounts of albumin in the urine, and to the cardio-vascular alterations.

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#### THE DIFFERENTIAL DIAGNOSIS OF ALBUMINURIA.

Albuminuria is a term used to denote the presence in the urine of different proteid substances—serum albumin, serum globulin, nucleo-albumin, albumose, peptone, fibrin and hemoglobin. Formerly regarded as diagnostic of Bright's disease, it is now generally known that albuminuria may be due to a wide variety of diseased conditions. We know, however, that large amounts of albumin in the urine almost always indicate serious kidney disease, but that, on the contrary, serious disease of the kidneys may exist for a long time with little or no albumin in the urine. In the great majority of cases of albuminuria the albumin is moderate in amount, and one generally has to determine whether the albumin is due to disease of the kidneys, to disease of some other organ, or to both. The importance and significance of albuminuria are always much enhanced by the associated presence of casts, but still we have to bear in mind that both albumin and casts may be present without serious disease of the kidneys, and that serious forms of Bright's disease may exist without either albumin or casts in the urine. The differential diagnosis of albuminuria, therefore, is of considerable importance. For purposes of study we may distinguish the following forms of albuminuria: 1, Extrarenal, spurious, accidental or factitious albuminuria; 2, so-called functional, physiologic or cyclic albuminuria; 3, albuminuria without noteworthy alterations in the kidneys, and 4, albuminuria with noteworthy alterations in the kidneys.

#### EXTRARENAL, SPURIOUS, ACCIDENTAL OR FACTITIOUS ALBUMINURIA.

These are the cases in which the albuminuria is but a subsidiary factor and entirely dependent on the admixture with the urine of different albuminous fluids—blood, pus, chyle and seminal discharges. Chyle is a very rare constituent of the urine, and when present will scarcely fail of recognition. Seminal discharges in the urine are of more common occurrence; the variest tyro will scarcely fail to detect them. The greatest interest attaches to the cases of albuminuria associated with blood and pus in the urine—the result of inflammation and ulceration of, and of hemorrhage from, any part of the genito-urinary tract. In these cases the amount of albumin is small—not more 1/10 by bulk (after the heat and acid test), and it is proportionate to the amount of blood and pus. A disproportionate amount of albumin should always excite a suspicion of the coexistence of nephritis. The presence of casts in the urinary sediment is of the greatest importance—their persistence being clear evidence of nephritis, and indicating that at least a part of the albumin in the urine is due to circulatory and tissue alterations in the kidneys. One must avoid error in presuming the non-existence of nephritis in

cases in which a small amount of albumin and casts are associated with a few leucocytes or pus corpuscles. In most of these cases the albuminuria is due in great part to nephritis—a few leucocytes or pus corpuscles being regular constituents of the urine in Bright's disease. The means of determining the situation and nature of the lesion causing the pus and blood in cases of spurious albuminuria scarcely falls within the scope of this communication.

### SO-CALLED FUNCTIONAL, PHYSIOLOGIC, CYCLIC, INTERMITTENT, PAROXYSMAL, DIETETIC, POSTURAL AND ADOLESCENT ALBUMINURIA.

The occurrence of a "physiologic" albuminuria is now generally conceded. It is found especially in young subjects, especially in male subjects under 25 years of age. It is usually detected accidentally, as, for instance, at examinations for life insurance, or for other certificates of health. In some cases it appears to be constant and it lasts for a relatively long time; in other cases it is intermittent—occurring at stated or indeterminate periods. In many of the cases the presence and the amount of the albumin are much influenced by certain circumstances—posture (whence it is sometimes absent on arising in the morning and present later in the day), exercise, emotional and other excitement, cold baths, certain articles of diet (especially proteids, but also large amounts of ordinary mixed foods), prolonged anxiety, college and university examinations, etc. In diagnosing this form of albuminuria considerable circumspection must be exercised. The patient should be a young subject; the urine should be normal in amount (certainly not increased), normal in color, and normal in specific gravity (certainly not of lessened specific gravity); the amount of albumin must be small—never more than 0.1 per cent.; the urine must contain no other abnormal constituent; there must be no local disease of the genito-urinary tract, such as gleet, spermatorrhea, leucorrhea, etc., that might give rise to spurious albuminuria; every bodily organ must be examined and found to be in perfect health—in particular there must be no hypertrophy of the left ventricle of the heart, no accentuation of the aortic second sound, and no increased arterial tension; nor may there be any evidence of disorder of the heart, lungs or liver that might occasion congestion of the kidneys; there must have been no past, nor may there be any present, edema, uremic manifestations or retinal changes; and at the most there must not be more than an occasional hyaline cast. Even in cases that meet these requirements, much caution must be observed, and the diagnosis must not be made until the patient has been long under observation, until both the morning and the evening urines have been repeatedly examined, and until the albumin is found to vary with the influences under which it develops. And when the diagnosis has been made one should stand willing to renounce it immediately on the development of signs of disease likely to be attended by albuminuria. Caution is always necessary inasmuch as albumin may be temporarily absent even for long periods in certain cases and at certain stages of chronic indurative (or interstitial) nephritis, whereas, in other cases it may be present in such small amounts as to require delicate tests for its detection. More than a small amount of albumin always suggests a latent nephritis that for the time being may reveal itself by no sign other than the albuminuria. The caution necessary in the diagnosis of these cases is evident from the statement of Senator, who believes that most cases of so-called cyclic or functional albuminuria are really cases of latent nephritis, and that no case of albuminuria may be regarded as functional or physiologic if the albumin exceeds 0.4 or 0.5 parts in 1,000. The diagnosis of functional albuminuria in late adult life had best be dispensed with entirely, as practically without exception small amounts of albumin in the urine of such subjects means chronic nephritis (excluding cases of extrarenal albuminuria).

The cause of this functional or cyclic albuminuria is not well understood. It has been attributed to vascular alterations (congestion) of the kidneys, and to disturbances in metabolism, in consequence of which albumoses, excessive in quantity or abnormal in quality, are formed. That many of these cases are really cases of physiologic albuminuria may well be doubted. Some of them are certainly cases of spurious albuminuria. In most cases it is likely that the glomerular epithelium suffers some nutritional disturbance; that it is the seat of at least slight irritation in some cases may be inferred from the associated presence of oxalates in considerable numbers. In some cases the renal epithelium is probably unduly sensitive. Inasmuch, however, as most cases recover entirely after a time, the kidney alterations—still within the range of the normal—are more or less persistent; in other cases they are intermittent or paroxysmal. These cases may be confounded with the rather unusual cases in which following an acute nephritis in early childhood a trace of albumin persists throughout life, but the patient lives to a good old age without other manifestations of nephritis developing. Such persistent albuminuria, of course, indicates slight alterations in the renal epithelium, and in case careful inquiry is not made into the antecedent history of the patient, the condition may be regarded as "physiologic" albuminuria.

### ALBUMINURIA WITHOUT NOTEWORTHY ALTERATIONS IN THE KIDNEYS.

A slight amount of albumin may be found in the urine in a great variety of morbid conditions without noteworthy alterations in the kidneys. Thus it may be found in different blood conditions, such as the anemias, leukemia, purpura, scurvy, etc.; in certain forms of intoxication, such as lead poisoning, mercurial poisoning, etc.; in conditions associated with the presence of substances such as sugar and bile-pigments in the blood; after the administration of anesthetics; in fever conditions, and in certain nervous disorders—epilepsy, apoplexy, meningitis, tetanus, exophthalmic goiter, injuries to the head, etc. In most of these cases the albuminuria is attributable to nutritional disturbances in the glomeruli and renal epithelium induced by defective blood supply; in some cases the result of nervous influences. The true nature of these cases is usually readily recognized. The albuminuria is slight and temporary, as a rule; the primary disorder is sufficiently obvious, and there is no other manifestation of Bright's disease. It is important, however, to point out that the conditions in the kidneys found in some of the intoxications and in fever states merge gradually into the well-defined lesions of nephritis—that there is no sharp dividing line between them.

### ALBUMINURIA WITH NOTEWORTHY ALTERATIONS IN THE KIDNEYS.

In this group are included the cases of active and passive congestion of the kidneys, cases of toxic degeneration of the kidneys (most of the cases of febrile albuminuria), the kidney of pregnancy, amyloid degeneration of the kidney, the acute and chronic suppurative

and non-suppurative inflammations of the kidneys, and the tumors of the kidneys. In all of these cases the albuminuria is due to some more or less severe temporary or permanent damage to the kidneys, and the albuminuria acquires its clinical significance and diagnostic importance from the attendant phenomena. In acute congestion of the kidneys the albumin is small in amount, the urine is decreased in quantity and frequently more or less hemorrhagic, and the causative factor usually can be determined. In most cases, however, acute congestion of the kidneys represents but the early stage of acute nephritis from which it is scarcely to be differentiated. In chronic congestion the albumin varies in amount in different cases. In chronic heart and lung diseases it is usually small in amount, but in cases of chronic congestion due to obstruction of the renal veins by a tumor or ascites, etc., the amount may be large. The diagnosis of chronic congestion is to be based on the attendant phenomena and not on the amount of albumin. Toxic or febrile albuminuria is an interesting condition that merits much attention. The albumin in these cases is due to the direct action of some toxin on the renal epithelium rather than to the fever, though this may be a contributing factor; in the one case the toxin induces marked degeneration of the renal epithelium, in another case it leads to severer lesions—to an acute nephritis. In toxic albuminuria the albumin is slight or moderate in amount and transitory, disappearing with the intoxication or infection that gives rise to it. A detailed discussion of the albuminuria of the different forms of Bright's disease scarcely falls within the scope of this communication.

THE CARDIOVASCULAR CHANGES IN CHRONIC NEPHRITIS.

These changes are of extreme interest and importance; as a matter of fact, they dominate the clinical picture of the disease and they assume commanding position in the prognosis and in the treatment. The lesions are widespread, involving the heart, the large and the smaller arteries, the capillaries, sometimes even the veins. The lesions of the heart in chronic indurative nephritis involve the muscle and find their expression in hypertrophy. With this, at times, there is associated some interstitial myocarditis with increase of the intermuscular fibrous trabeculæ, especially in the neighborhood of many of the smaller coronary arteries which frequently are obliterated. In some cases, especially late in the course of the disease, fatty degeneration of the heart muscle also may supervene. Valvular lesions are extremely uncommon. Those that are found in cases of renal disease are either an antecedent condition, or they result from mechanical causes, from dilatation of the cavities of the heart. The lesion in these cases is one of relative insufficiency—the valve leaflets, in themselves normal, being incapable of closing the abnormally enlarged orifices. The hypertrophy of the heart is predominately a lesion of the left ventricle. In the majority of cases the left ventricle alone is affected; in the remainder of the cases both ventricles are affected. The right ventricle is never affected alone. Simple hypertrophy of the left ventricle is the first event; later this is associated with some dilatation—eccentric hypertrophy. The longer the nephritis continues (the longer the patient lives) the more certain the development of consecutive enlargement of the right ventricle the increased pressure in the left ventricle coupled with degenerative alterations in the heart muscle, leading to increased pressure in the right ventricle. Here also the hypertrophy is of the eccentric variety. Predominating dilatation of either or both ventricles is an unusual event until toward the termination of life; its development is of ominous moment—it usually presages an early fatal termination. It has been stated by Senator and others that the hypertrophy of the primarily contracted kidney is of the simple variety, whereas that associated with the secondarily contracted kidney and with the anteriosclerotic kidney is of the eccentric variety—hypertrophy with dilatation. But this statement scarcely permits of general application.

This hypertrophy of the heart occurs in all forms of nephritis, but not in all cases. In none of the varieties, however, does it so dominate the clinical picture as it does in chronic indurative or interstitial nephritis. It may be expected from the time of the contraction or atrophy of the kidney, be it of the primary or the secondary variety. Thus it occurs early in the primary form, but its occurrence may be (but usually is not) much delayed in the secondary form. It may, however, occur in chronic diffuse non-indurative (or parenchymatous) nephritis, and it is observed in some cases of acute nephritis, particularly in some of the cases of acute nephritis following the infections. In some of the chronic cases in which it should be expected, for some more or less inexplicable reason it may not occur. These, however, are the unusual cases. The absence of the hypertrophy may be due to faulty nutrition—the heart not being sufficiently well nourished to enable it to hypertrophy; to sclerosis of the coronary arteries; to the vicarious action of one of the other emunctories removing those excrementitious products ordinarily eliminated by the healthy kidneys, etc.

The changes in the arteries are more complex than are those in the heart, and the exact mode of their causation is still debated. In many cases the larger arteries show a loss of elasticity, in other cases more or less arteriosclerosis and atheroma; but neither the one nor the other is a constant feature. The medium-sized and the smaller arteries almost invariably have thickened walls—the lesions being conspicuous in the middle and in the innermost coats. Presumably the first alteration consists of a hyperplasia of the muscular coat—an alteration effected in response to increased functional demands, the result of an effort on the part of the arteries to control the circulation. After a while, or in some cases possibly from the beginning of the disease, fibroid or hyaline degeneration supervenes. In some cases both the muscular hypertrophy and the fibroid alteration may be observed side by side. The changes in the innermost coat consists especially of thickening of the subendothelial layer, and in many cases of some thickening also of the endothelium itself. In the early stages of the disease the arterial lumen is diminished from contraction of the muscular coat. Later, on account of the increased arterial pressure, the overaction of the heart and degeneration of the walls of the arteries, the result of defective nutritive supply, in part, at least, attributable to obstruction or compression of the vasa vasorum, the arterial lumen becomes increased. The increase, however, is in part counteracted by the thickening of the endothelium. The changes in the arteries though widespread are not distributed uniformly throughout the body. In many cases they are most marked in the kidneys; in a few cases they appear to be almost confined to them. A noteworthy arterial condition consists of the development of miliary aneurisms that in many cases are numerous and implicate especially the arteries of the

brain, and rupture of which frequently leads to the fatal termination.

The cause of these cardiovascular alterations has not been thoroughly worked out. Considerable discussion still obtains with reference to whether the primary alterations are in the arterioles (stop-cock action of Johnson), or in the capillaries (the arteriocapillary fibrosis of Gull and Sutton). Doubtless the conditions differ in different cases. Thus arteriosclerosis itself may be the primary event( and this seems to be especially common in this country), and it leads to both the kidney alterations and the cardiac hypertrophy. In this instance the disease is a widespread process, and its etiology is the etiology of arteriosclerosis. However, in many cases the nephritis is the primary event and leads to the cardiovascular alterations. What seems to be true is that the cardiovascular alterations result from obstruction to the flow of the blood in the arterioles and capillaries throughout the body, and that this obstruction is provoked by the presence in the circulating blood of some irritative metabolic product or products that should be, and in health are, eliminated by the kidneys. The nature of this poisonous metabolic product, whether there be one or several poisons, and whether the same poison or poisons are operative in all cases has not yet been determined. Whether the poison or poisons exert their action on the circulation through the vasomotor system —irritation provoking contraction of the arterioles, or whether they exert a direct action on the vessels obstructing the flow of blood through them entirely independently of the nervous system, is still debated. The question is further complicated by the adherence of certain writers to the mechanical theory first proposed by Traube, later elaborated by Cohnheim, and modified by Tyson, who looks on the cardiovascular changes as compensatory in nature and set up with a view to supplement the gradual loss of renal substance. For the time being, as clinicians, therefore, we have to content ourselves with recognizing the clinical manifestations, and appreciating the importance of these cardiovascular alterations. I have already had occasion to mention these in detail.[1]

### SYMPTOMS OF CHRONIC INTERSTITIAL NEPHRITIS.

The first clinical manifestations of chronic interstitial nephritis differ materially in different cases. For the present, leaving out of consideration that form of chronic indurative nephritis that develops late in the course of the large white kidney, and which in many cases is scarcely to be distinguished from the large white kidney, it may be said that the early stages of chronic indurative (or interstitial) nephritis—the red granular kidney, usually escape detection, or they are discovered accidentally by the routine examination of the urine of patients ill with other diseases, or in examining applicants for life insurance or for other certificates of health. When, finally, after a number of years the disease does produce obstrusive symptoms, these are usually of such a nature that they are likely, for a time at least, to be attributed to disease of some organ other than the kidneys. Thus, while the patient may present himself to his physician with the idea that he is suffering with diabetes on account of the large amount of urine that he voids, he is just as likely to complain of dimness of vision, the consequence of albuminuria neuroretinitis, or of one of the many manifestations of chronic uremia, such as dyspnea, asthma, gastrointestinal derangements (gastric catarrh, gastric hemorrhage, diarrhea), or headache, hemicrania, tinnitus aurium, or vertigo, etc., or neurasthenia, pains in the muscles or joints, or eczema, of palpitation of the heart and precordial distress; or, the patient, in apparent good health, may suddenly develop a severe and even fatal attack of cardiac failure, pass into uremic coma or convulsions, or he may suffer an apoplexy and die.

### DIAGNOSIS.

Revealing itself thus in different ways, the diagnosis of chronic interstitial nephritis depends on the results of an examination of the urine and of the cardiovascular apparatus. The characteristics of the urine are too well known to need detailed mention. Suffice it to say that the urine is increased in amount, of low specific gravity. Especial interest and importance attaches to the albuminuria. The amount of albumin is usually slight; often there is no more than a trace; at times none may be found. Importance attaches to the absence of albumin in many cases. The albumin may be absent for days or weeks at a time; it may be absent for the early morning urine and present in that passed later in the day; and it may be present only after exercise, emotional and other excitement, or after eating, especially after eating proteids. In this respect it resembles the so-called functional or cyclic or dietetic albuminuria, and especial care must be exercised in the differential diagnosis, as already pointed out. The urinary sediment usually contains a few hyaline casts, rarely a few epithelial and granular casts. Frequently the casts are very narrow.

In view of the oftentimes slight evidence of renal disease on the part of the urine the cardiovascular lesions assume considerable, even dominant, importance. The clinical evidence of the cardiovascular lesions consists of hypertrophy of the heart, especially of the left ventricle, accentuation of the aortic second sound, and of increased arterial tension. The signs of the cardiac hypertrophy are sometimes obscured by coexisting emphysema of the lungs, but usually one may make out displacement downward and outward of the apex, increased force and vigor of the apex beat, which though usually slightly broader than normally is still well circumscribed, and the percussion evidences of enlargement of the left ventricle. Concurrently with increase in the muscular volume of the heart the first sound becomes more prolonged, duller and lower pitched than in health. The second aortic sound becomes markedly accentuated—a very important sign, and a sign that frequently may be made out when enlargement of the heart is as yet problematic. The changes in the pulse are of great diagnostic value. In the early stages of the disease, the arteries being contracted, the pulse is small; the internal pressure being increased, the artery resists compression and flattening; on account of the increased internal pressure and the contraction of the vessels, the pulse waves are small. The pulse, therefore, is hard and resisting to the palpating fingers, the pulse waves are small, the artery remains persistently full between beats (and this is the characteristic feature), and considerable pressure is required to obliterate the pulse wave. Later to these there is added the evidence of arteriosclerosis, and later still the more characteristic changes of atheroma. As I have said elsewhere,[2] the existence of these cardiovascular changes, as also of the kidney lesions, may for a long

1. The Interrelationship Between Cardiovascular Disease and Renal Disease, Philadelphia Medical Journal, Oct. 27, 1900. Diseases of the Kidneys, Nephritis, Bright's Disease, Wood's Reference Handbook of the Medical Sciences, revised edition, vol. v, 1902.

2. What follows is a reiteration of what the author has already said in the Philadelphia Medical Journal and in Wood's Reference Handbook of the Medical Sciences, l. c., which may be consulted for a fuller discussion of the questions concerned.

time remain entirely unknown to the patient and be entirely unsuspected by the physician. So long as the heart continues to perform its increased work well no symptoms occur. Should, however, the increased quantity of the urine or the development of slight swelling about the eyes or the ankles attract the patient's attention, or should he suffer from epistaxis (usually of serious moment), or from dimness of vision (due to neuroretinitis), or from severe muscular cramps in the calves of the legs (which are quite common), or from any of the symptoms of chronic uremia, inquiry on the part of the physician may elicit the information that for months, possibly years, excitement and exertion have been provocative of breathlessness and palpitation of the heart, but having an obvious cause they were regarded as of no particular significance. As the disease advances, however, the nutrition of the heart no longer keeps pace with its enlargement, degenerations ensue, and evidences of embarrassed circulation result. It is now that symptoms referable to the cardiovascular system dominate the clinical picture. To the hypertrophy of the heart, if it were simple, there supervenes dilatation, and to disease of the left ventricle is added disease of the right. There result cardiac asthma, congestion and edema of the lungs, bronchitis, gastrointestinal disturbances, generalized edema and effusions within the serous cavities and alterations in the urine. The urine lessens considerably in amount, and it becomes of high color and increased specific gravity; albumin increases in amount and casts become more numerous, and dark granular, epithelial, and even blood casts and free erythrocytes may be encountered. The symptoms referable to the heart and lungs, at first transitory and nocturnal, become permanent, the other symptoms mentioned are added, and if relief is not afforded, death ensues with cardiac failure or uremia or both dominating the final scene. Toward the end of life concurrently with the cardiac failure, the pulse which had been of high tension may become of lessened tension; the second aortic sound becomes less accentuated; with embarrassment of the right heart the second pulmonary sound becomes accentuated; signs of dilatation, and galop rhythm, always of serious moment, supervene.

So long as cardiac compensation is maintained the diagnosis of chronic indurative or interstitial nephritis is evident from the results of an inquiry into the antecedents of the patient, the special etiologic factors in the case, the different clinical manifestations, and an examination of the urine and of the cardiovascular apparatus. Indeed, a diagnosis based on increased arterial tension, accentuated second aortic sound and the physical signs of hypertrophy of the left ventricle will rarely be wrong. The diagnostic importance of these cardiovascular alterations can not be overestimated. They are among the earliest clinical manifestations of the disease, and they may be detected even in the absence of positive signs of kidney disease in the urine. Such is their double import that, in the event of suspicion of chronic indurative nephritis, they should be diligently sought, and in the event of their accidental detection in the course of the routine examination of a patient, the presence of an unsuspected or latent chronic indurative nephritis must be persistently borne in mind until these cardiovascular signs are otherwise adequately accounted for.

When, however, failure of cardiac compensation occurs, diagnostic difficulties arise. The clinical picture in these cases much resembles that of an affection primarily cardiac and secondarily renal. Given a patient with evident lack of cardiac compensation, with signs of hypertrophy and dilatation of the heart, but with such dilatation that it may be well-nigh impossible to determine accurately which side of the organ is especially involved; with or without murmurs; with albumin and casts in his urine—does he suffer from a condition primarily cardiac and secondarily renal, or vice versa? Is the affection one of a primary heart lesion with secondary congestion or cyanotic induration of the kidneys, or is it one of a primary kidney lesion with secondary hypertrophy and dilatation of the heart? The question is extremely difficult to settle offhand in many cases. The presence or absence of murmurs is not definitely diagnostic unless it is possible to accurately localize them and refer them to positive valvular defects. We bear in mind that if there be marked cardiac debility, a murmur of some valvular defect may be temporarily absent; on the other hand, in chronic indurative nephritis, if the cardiac dilatation be sufficient a relative mitral insufficiency may arise and a murmur not present previously becomes audible. Thus murmurs complicate the situation. However, a diastolic murmur is usually suggestive of valvular disease, since the murmurs of dilatation and consequent relative valvular incompetency are systolic. In the majority of cases the diagnosis can be made by bearing in mind that in congestion of the kidneys the casts are usually hyaline only, and that the amount of albumin, which may be considerable, varies from time to time with the state of the heart—increasing or decreasing with impairment or improvement in the cardiac activity. Again, in renal congestion we endeavor to ascertain the cause by reference to the past history of the patient and by noting that the kidney lesion is but part of a general condition that finds its expression also in congestion of the liver and spleen, effusions within the serous cavities, anasarca, etc. If, however, the urine remains albuminous despite the subsidence of signs of congestion in other parts of the body; if the specific gravity of the urine lessens, and if in addition to hyaline even a few epithelial casts are discovered, possibly also some erythrocytes, it is evident that in addition to the congestion of the kidneys there exists a nephritis. Whether or not this is a condition of long standing or the final result of long-continued congestion remains to be decided by reference to the past history of the patient. It is in these cases that the therapeutic test is of the greatest diagnostic value. It is in these cases that digitalis is urgently indicated. If, as sometimes happens, the exhibition of digitalis is followed by marked improvement in the condition of the patient, with final absence of casts and albumin from the urine, the condition is definitely determined to have been one of renal congestion. If, however, with improvement in the cardiac condition, albumin and casts do not disappear from the urine, we are then confident of the existence of nephritis—a conviction that may be confirmed by an examination of the cardiovascular apparatus now that compensation has been restored.

In many cases eye manifestations are of great diagnostic importance. Thus the first manifestations of the disease may be edema of the eyelids—especially the lower lids. This may be moderate, sometimes transitory; at times the first, and rarely the only manifestation of the disease for some time. I have known it to develop and persist for seven years before any albumin or casts could be detected in the urine and before any certain evidences of cardiovascular alterations could be elicited. Especial interest, however, attaches to the albuminuric neuroretinitis and to uremic amaurosis. Albuminuric neuroretinitis occurs most frequently in

chronic indurative or interstitial nephritis, but also in chronic nonindurative (or parenchymatous) nephritis; it is therefore more common in subjects over 40 years of age, though it has also been observed in children. Though in a few cases unilateral it is usually bilateral. Often the dimness of vision that it occasions may be the first symptom of the disease, though it is not likely that this comes on before the albuminuria. In many cases the vision is but little impaired; in the absence of involvement of the macula lutea, of extensive hemorrhages and of optic neuritis, no complaint may be made. Thus these important and serious lesions may go unsuspected and undetected unless examination of the eyegrounds be undertaken. These retinal changes bear no relationship to the severity of the renal lesions nor to the amount of the albuminuria; in some cases they even appear to improve despite the progress of the kidney lesions, though this is the reverse of the rule. Hemorrhages are common; in other cases retinal effusions and detachment, vascular alterations or a papillitis is to be observed—so that the ophthalmoscopic picture varies considerably in different cases. Though the retinal lesions may be extensive, vision is rarely lost except in cases of what is called uremic amaurosis. This is an extremely interesting condition, the nature of which is not understood. While it may occur independently of uremic convulsions, it usually follows the convulsions. The blindness is sudden in onset, usually complete, short in duration (two or three days), and usually very rapid in recovery. The ophthalmoscopic picture is usually quite normal; in other cases the lesions of neuroretinitis are detected. At times the blindness is not complete; in rare cases hemianopsia has been observed.

In some cases skin symptoms are suggestive, though their nature is frequently overlooked. Thus there may be intolerable itching, formication, numbness of the extremities or urticaria. In the late stages more or less widespread erythematous, or bullous, or desquamative skin lesions may occur.

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## THE EARLY CIRCULATORY INDICATIONS OF CHRONIC BRIGHT'S DISEASE.*

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By chronic Bright's disease we mean that familiar form of degeneration involving the blood vessels, the kidneys and the heart that in its regular course leads to the death of so large a proportion of the human race who have otherwise been healthy and able to enjoy active and useful careers.

### PRIMARILY A DISEASE OF THE CIRCULATION.

I have long since ceased to regard this condition as essentially a disease of the kidneys, though in the final catastrophe these organs are more often chiefly at fault. Primarily, it is a disease of the circulation in which the brain and the kidneys, being as it were end-organs, first manifest symptoms.

A case that has been under observation for five years has just ended fatally by the involvement of the circulation of the brain, producing progressive stupor and finally coma, paralysis and death. The kidneys at the time of death were apparently in good enough order to have maintained life for a long time. In this case the greatest care had been exercised in protecting the kidneys by diet, an even temperature and every other possible means, thus allowing the arterial disease an opportunity for its complete development. The same case, if less carefully guarded, would have progressed by repeated attacks of uremia to a death by the development of anasarca and exhaustion.

So the paradox appears that a person may die from Bright's disease with fairly good kidneys, proving that in this disease the brain and the kidneys are both end-organs, and that in particular cases the brain may suffer more than the kidneys.

### KIDNEY SYMPTOMS LATE TO APPEAR.

This point is important in considering the early indications of chronic Bright's disease. The kidneys are insensitive organs, rarely giving rise to pain, intermittent in their action and entirely removed from direct observation. For that reason disorder of the kidneys must have reached a grave stage before it becomes a matter of consciousness. On the other hand, the brain, as the seat of consciousness, is highly sensitive to any intermittance of its functions. It is capable also of examination and observation by the observation of the fundus of the eye which is in close relationship to the brain.

So the brain records at all times in a more or less distinct manner the condition of the circulation and a careful study of the symptom-complex soon reveals which disturbances of the circulation indicate organic disease of the vessels and early Bright's disease. Attention and observation soon make this symptom-complex of extreme significance.

Even in cases in which chronic Bright's disease follows acute nephritis the establishment of the chronic condition is characterized by certain detectable vascular changes. In cases of acute nephritis one watches the circulatory system with anxiety because when changes are established the chance of complete recovery is diminished.

### CIRCULATION SYMPTOMS.

There are, of course, disturbances of circulation connected with acute Bright's disease. The heart is temporarily debilitated so that there is often established a blowing systolic murmur at the apex. With the profound anemia and the nervous phenomena that accompany the disease this may lead to functional disturbances of the circulation. These must, however, be distinguished from the changes that take place in the arteries and indicate the transition from subacute nephritis to the chronic general condition. The same change often indicates the establishment of a chronic nephritis in cases of valvular disease of the heart that have been accompanied by prolonged congestion of the kidneys.

The contracted kidney develops gradually and only after a very long time gives symptoms referable to it.

Though we can hardly suppose that cardiac hypertrophy can be established except by some cause acting for a considerable period of time, still it is often the earliest detectable symptom of chronic nephritis. Abnormal arterial tension for the moment may be absent either on account of treatment or some other cause. A physical examination shows distinct cardiac hypertrophy, and we suspect at once the existence of a contracted kidney.

### SOME EARLY SYMPTOMS.

A striking point in Bright's disease that first comes to our notice as a circulatory disturbance is the way in which it progresses. Ordinarily, a patient comes under observation, and as the result of treatment the symptoms entirely disappear and he considers himself well. Later

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. Frank Billings, George Dock and J. M. Anders.

the symptoms return, and this time grow steadily worse, the patient develops languor and weakness, and begins to complain of bad breathing. Ordinarily, the early circulatory disturbances of Bright's disease are not sufficient to cause dropsy.

It is probable that an increased flow of urine found in early Bright's disease is due as much to increased blood pressure as to any definite change in the kidneys. Loomis speaks of an increased frequency of urination as an early sign of Bright's disease and this again may very well be accounted for by increased secretion due to increased arterial tension.

Nose bleed is another possible result of increased arterial tension, and may, therefore, indicate the beginning of Bright's disease. Another accompaniment of increased arterial tension is headache, due apparently to increased vascular tension in the head.

I would like to class as one of the early circulatory disturbances of chronic Bright's disease certain attacks of indigestion. These are due at this early stage to disturbances of circulation in the stomach, and are not to be confounded with the uremic nausea that comes later.

### DIFFICULTIES IN DIAGNOSIS.

Bright's disease more often develops in an atypical than in a typical way, and that even in its final fatal course it may never present the symptoms that one would expect. The earliest symptoms of Bright's disease, and also the latest and fatal symptoms, may be a simple failure of strength as seen in simple degeneration of the kidneys, and as is found in those cases of old people who died apparently from a loss of vitality alone.

So the early symptoms are often an unhealthy look, loss of strength and such disturbances of digestion as may be referred to simple weakness. The urine may not contain albumin except at rare intervals so that it would not be detected by anything but systematic observation. So we must ever be on our guard not to overlook Bright's disease when presenting these symptoms in its very early stages, nor must we fail to recognize the simple degeneration of the kidneys that is fatal to old people.

It is fair to say that the early signs of impending changes of the blood vessels are in type the early circulatory changes of Bright's disease. The first signs of degeneration are manifested by disorder of function. The blood vessels act as tubes to convey the blood to different parts of the body, but at the same time through the muscular structure of their walls they act as regulators of blood pressure. This pressure regulating function is an exceedingly complex one and controls the determination of blood to the different parts of the body as it may be most needed. This regulating function is that which first suffers when the tendency to degeneration begins to show itself so that irregularity of tension is the most important early circulatory indication of chronic Bright's disease.

So we have traced those signs and symptoms in the circulation which precede for a long time the establishment of that condition known as chronic Bright's disease. This pre-nephritis condition attacks chiefly the smaller arteries and these first show disordered function. Arterial tension or a tendency to it causes irregularity of blood pressure and is early recognized by symptoms indicating irregularities of circulation in particular parts of the brain. This irregularity gives rise to temporary unconsciousness, slight paralysis or simply clumsiness of a limb.

In spite of the more scientific nomenclature of disease the term "Bright's disease" still remains a most convenient name for these cardio-vascular nephritic diseases which form so large a part of the clientele of the family physician and the general medical consultant.

It has long been recognized that this disease has its origin often in structures remote from the kidneys. Not infrequently its first signs are found in the blood vessels. In relation to the circulation the brain most early indicates irregularity. Hence it early suffers from deterioration of the blood vessels, and gives the first symptoms of serious change in blood pressure. In advanced Bright's disease we find the brain and the kidneys going hand in hand in the symptomatology of the condition. The brain, on account of its much more highly-organized and delicate structure, often shows the first symptoms of the complex condition called Bright's disease through its early circulatory indications. The management of this condition is best carried out by hygienic measures, but certain drugs are of inestimable value.

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## UREMIC APHASIA.*

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PHILADELPHIA.

While the ultimate essence of uremia is unknown, everything points to the conclusion that the condition is a form of autointoxication, in whose production disease of the kidneys plays an important, but perhaps not the only rôle. The poison, like a number of others originating within the body, acts chiefly on the nervous system, although it is probable that no organ or tissue escapes its malign influence, inasmuch as it is conveyed to all parts of the economy by the blood.

### VARIETIES OF APHASIA.

In their protean and variable character, the nervous manifestations of uremia are comparable to those of hysteria.† Like the latter, they are sometimes so distinctly focal as to suggest the existence of a gross organic cerebral lesion, which the autopsy, however, generally shows to be absent. Among these focal symptoms the most interesting are hemiplegia, monoplegia, monospasm and aphasia. Objectively these four manifestations of uremia are, as a rule, indistinguishable from similar conditions produced by such lesions as hemorrhage, tumor, thrombosis, embolism and softening; but they differ in the important characteristic that at autopsy there is a total absence of any gross morbid lesion that could explain their focal character.

In a previous paper dealing with uremia‡ I referred to the fact that at the acme of a paralysis or aphasia it may be impossible to tell whether it is due to a gross lesion or is merely a manifestation of uremia. Incidentally, I must add that the existence of uremia does not exclude the possibility of hemorrhage or of embolism; especially not, since individuals suffering from Bright's disease have, for the most part, friable arteries, and not rarely valvular heart lesions.

The difficulties in diagnosis were strikingly brought home to me while I was assistant pathologist to the Phil-

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* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Practice of Medicine, and approved for publication by the Executive Committee: Drs. Frank A. Jones, George Dock and J. M. Anders.

† Since writing this, I have found, in an article by Chauffard (Arch. gén. de méd., July, 1887, p. 1), the following sentence: "L'uraemie est comme la syphilis et l'hystérie; elle peut tout realiser ou de moins tout simuler."

‡ Read before the State Medical Society of Pennsylvania, September, 1901.

adelphia Hospital. A number of postmortems were made on cases in which the diagnosis had been apoplexy, but in which I found, aside from trivial and irrelevant cerebral lesions, a macroscopically normal brain, while the kidneys were in an advanced stage of disease. On the other hand, cases came to autopsy in which, on account of albuminuria and cylindruria, uremic hemiplegia had been diagnosticated, but in which the autopsy revealed a large hemorrhage.

The occurrence of aphasia as a manifestation of uremia is mentioned by a number of writers on speech defects—among others, by Bateman,[1] Collins[2] and Wyllie,[3] and by authorities on renal diseases, such as Senator[4] and Freitag.[5] It is familiar to neurologists. Wilcox[20] refers to it in his excellent paper on uremic hemiplegia, and it has now a fairly large casuistic literature. The uremic origin of aphasia seems, indeed, to have been recognized before it was appreciated that uremia could produce a paralysis. Monod,[6] for instance, writing in 1868, mentions speech disturbances in discussing uremia, but says that paralysis never occurs.

Uremic aphasia, like the aphasia due to organic lesions, may be associated with right-sided paralysis, either hemiplegic or monoplegic in type, as in the following case:

CASE 26.*—*Summary.*—Male, 42. Several attacks of transient, right-sided hemiplegia, involving also the face and usually, but not always, accompanied by aphasia. Transient paralytic attacks, confined to the face or to the face and arm. Albuminuria, polyuria, thickening of the arteries. Complete recovery from aphasia and paralysis. Several months later general anasarca and death in uremic coma. No autopsy.

The first attack during which I saw this patient came on suddenly and was characterized by a complete right-sided paralysis, involving face, arm and leg, without anesthesia and with preservation of consciousness. Speech was entirely lost. He could understand what was said and could recognize his surroundings. The paralysis of the leg disappeared first, in a few hours; then that of the arm, except in the thumb and index finger, the power in which remained impaired for several weeks. Speech returned by the next day, but the facial paralysis persisted for some time—probably for more than a month.

On the occasion of another visit, Dec. 12, 1901, I found the patient feeling particularly well and sitting up in his chair. While conversing with me cheerfully and rationally, his countenance suddenly became expressionless, the face was drawn to the left, speech became thick and scarcely intelligible, and the right arm paralyzed. Conciousness was preserved, although he was a little dazed. He spoke with difficulty and seemed to have lost all idea of time. He could not give the age of his daughter or her birthday, and could not tell the day of the week or the date. There was no loss of sensation, although touch was felt a little less plainly on the right half of the face than elsewhere. The knee jerks were equal and active; there was no ankle clonus. After about five minutes, the patient all the while remaining sitting in the chair, speech improved and there was some return of power in the hand; but a few moments later he was as bad as before. After another few minutes he felt the power coming back; and when I left the grasp in his hand was stronger and speech was more distinct.

Although the albuminuria persisted, the nervous disturbances eventually disappeared completely, but the patient never grew quite strong. In March of 1902, there was a recrudescence of the uremic phenomena. He had hiccough, lasting for eleven days, and this was followed by vomiting, anorexia, dropsy, and death in coma.

Aphasia may also occur unaccompanied by any paralysis or any other focal cerebral symptom. Under such circumstances the diagnosis is often extremely difficult, and may never be definitely settled, unless there is an autopsy. Including a case of my own, I have collected from the literature fifteen cases in which aphasia unaccompanied by any motor or sensory paralysis occurred. My own case is as follows:*

CASE 27.—*Summary.*—Female, married, 46, the mother of six children. Has fibroid tumors, but has not suffered much from them. Sudden, aphasia and agraphia, preceded by tingling sensations in the fingers and toes. No paralysis; no word blindness or word deafness. Albuminuria; polyuria. Complete recovery.

I saw the patient, Mrs. S., on July 10, 1901, with Dr. H. Kirshbaum. She was married, of more than average intelligence, aged 46 and the mother of six living children. She had been suffering from fibroid tumors for a number of years and had had occasional attacks of vertigo. A few days before I saw her she had complained of tingling in the fingers and toes. On the morning of the 10th, after arising, she endeavored to give some orders to a servant, and was surprised and mortified when the latter laughed at her. On inquiry it was learned that this disrespectful conduct was due to the fact that the patient's speech was so mixed and jumbled that it sounded ridiculous. The lady sent for her physician, who found speech greatly disturbed—an observation that I was able to confirm when I saw her on the evening of the same day. When asked questions—for instance, how she felt, how many children she had, her age, etc.—she tried her best to answer, but could not find the necessary words, and instead, uttered words that, for the most part, were irrelevant or unintelligible. When the answers were given to her she nodded her approval. She was clearly conscious that her speech was meaningless and labored visibly, as if by a synergic effort, to bring forth the proper words. While making such futile efforts she became irritated and excited, and this made speech still worse. She could recognize objects held in front of her, but was unable to name them. When their correct designations were given to her, she repeated them in an intelligent manner. It was quite clear that her ideas were formed properly, but that the power of expressing them by means of speech was impaired. She used a number of words, many of which could not be understood, while others were more or less correctly enunciated, but taken together made only an unintelligible jargon.

A letter was exhibited to her. That she understood its contents was evident from her behavior and from the few words that were properly uttered, but she could not read it aloud connectedly. Voluntary writing was affected in the same way as speech. Asked to write her complaints she tried her best, but succeeded only in putting down a series of meaningless words. She wrote in the Yiddish script, and when the writing was shown to her sister the latter laughed heartily, being much amused by the absurdity of the patient's combination of words. The letters were individually well formed, but the words were grossly misspelled and in their totality meant nothing. Unfortunately, I neglected, at my first visit, to test copying and writing from dictation. The patient was asked to sing the Russian national hymn, and it was found that while she could carry the tune, the words were not correctly enunciated. Her facial play was expressive and her intonation natural. There was no paralysis, either of the face or of the limbs. The tongue was not paralyzed and was protruded straight. The reflexes were normal, and the pupils equal and responsive to light. There was no loss of sensation, no disturbance of vision and no contraction of the visual field on rough testing while the patient was in bed. Temperature, pulse, and respiration were normal. Physical examination revealed nothing save accentuation of the second aortic sound and the presence of fibroid tumors. An examination of the urine, made the next day, showed albumin and a low specific gravity, 1010; there was also polyuria. These facts suggested the diagnosis of uremic aphasia.

July 21, eleven days later, I saw the patient again. She was very well, could write and talk intelligently, and only when speaking fast did she have any trouble in finding the proper words. She could read and write spontaneously and from dic-

* The number refers to list of cases at end of article.

* The case was briefly reported at the meeting of the Pennsylvania State Medical Society, in September, 1901.

tation. Her color was pale and she had lost some flesh. A re-examination of the urine still showed albumin; casts were not present. About two months ago, the patient's husband died in uremic coma; the patient herself is still living.

We had, then, in this patient, a motor aphasia or paraphasia and agraphia (paragraphia) without disturbance of interior speech. She was able to see and hear and to formulate in her own mind the concepts to which she desired to give expression, but she could not exteriorize her thoughts through the medium of speech and writing. Evidently the pathway between the speech and writing centers—in the foot of the third and second left frontal convolutions, respectively—and the periphery was interrupted. Such a form of aphasia is termed subcortical or infrapictorial motor aphasia (subcortical motor-agraphia).

The existence of a graphic center distinct from the speech center is strenuously denied by Dejerine,[7] but is maintained by Mills,[8] who supports his contention with very cogent reasons. If there is a graphic center, it must be separate from the motor centers of the arm and hand—a view supported by my own case, in which there was agraphia without any paralysis of the arm or hand. The graphic center is placed by Exner,[9] Bernard,[10] Mills and others at the foot of the second left frontal convolution, in close proximity to the motor centers for the right arm and hand.

In the absence of autopsy it is, of course, impossible to make an absolute diagnosis in the present case, and several other possibilities than uremia must be considered, among them hemorrhage and embolism, as well as poisons other than that of uremia. As regards hemorrhage, that is unlikely, since an effusion of blood extensive enough to cause aphasia and agraphia would, in all probability, produce some paralysis; nor would recovery be as prompt in a case of hemorrhage as it was in my patient. An embolus plugging a vessel supplying the speech and writing centers might bring about aphasia and agraphia without causing a paralysis; but there were not, in the patient, the usual sources of emboli. But even in cases of nephritis in which a valvular lesion exists and embolism, therefore, is possible, an aphasia may be uremic, as in the following instance recorded by Rendu:[11]

Case 25.—A man, 56 years of age, was suddenly seized with an apoplectiform attack. On regaining consciousness he was found to be aphasic and to have right brachial monoplegia. As there was a systolic murmur at the base of the heart, a diagnosis of embolism was made. Several days later, however, intense dyspnea and Cheyne-Stokes breathing developed, and the urine became scanty and albuminous. The patient was bled, and the blood was found to contain 0.75 grams of urea per liter. After the venesection, all the symptoms disappeared—the aphasia, the monoplegia and the respiratory symptoms. Rendu concluded—very properly, it seems to me—that the aphasia and monoplegia, as well as the Cheyne-Stokes breathing, were due to the same cause, namely, uremia.

Rotch[12] reports a case quite similar to that of Rendu (see Case 28) in which, owing to the presence of a heart murmur, embolism was diagnosticated; but it is quite probable that the aphasia was uremic.

As for other forms of poisoning, either endogenous or exogenous, there was no evidence whatever of their existence. Migraine sometimes causes focal brain symptoms, but the patient was not a sufferer from this affection.

### CHARACTERISTICS OF THE DISEASE.

I have collected from the literature 27 cases of uremic aphasia. These with my two make 29. Fifteen of them were pure aphasias, i. e., unaccompanied by any paralyses. In 14 some form of palsy coexisted. This latter type of cases could, no doubt, be greatly multiplied, as it is very probable that in many instances of uremic hemiplegia there is aphasia which is not recorded in the published histories.

*Age.*—Children as well as adults are subject to uremic aphasia. According to Dupré[13] the former are more prone to it than the latter. In children it seems to occur especially in post-scarlatinal nephritis. In my table of 29 cases there were: 2 under the age of 10, 2 between 11 and 20, 3 between 21 and 30, 4 between 31 and 40, 8 between 41 and 50, 2 between 51 and 60, 6 between 61 and 70, 1 between 71 and 80, and 1 between 81 and 90.

*Sex.*—There were 23 males and 6 females.

*Mode of Onset.*—The onset of uremic aphasia is sudden. There may be no antecedent signs of illness whatever, as in the case cited by Hoppe and the second of my own, or the more common symptoms of nephritis—such as dropsy and visual and cardiac disturbances—may be present in advance. In some instances, uremic symptoms—headache, vomiting and paresthesias—precede the onset of the aphasia. In a few cases the aphasia has followed a convulsion. Several authors refer to the fact that excitement or overwork may bring on an aphasic attack, as it may also predispose to hemiplegia. As hemiplegic attacks have been known to come on during sleep it is probable that aphasia may do likewise; it seemingly did so in my case.

*Types of Aphasia.*—The majority are motor aphasias of the subcortical type. The patient knows what to say, but can not give expression to his thoughts. Writing may be affected in the same way as speech, as was noted in the cases of Dupré[14] and Lloyd,[15] and in my second case. The degree of aphasia varies: in some there is a total loss of speech, only a word or two—as, for instance, the word "yes"—remaining; in others there is merely a slight disturbance, a few words being lost or misused—a so-called paraphasia, with or without paragraphia. Between these extremes all gradations may be encountered. Sensory forms of aphasia are quite rare, but word deafness (Jocqs' case—No. 16) and word blindness (Lloyd's case—No. 18) have been noted.

*Coincident Cerebral Symptoms.*—In 14 out of the 29 some form of paralysis—principally right-sided hemiplegia—was a concomitant of the aphasia. Hemiplegia was present in 10 instances; in 2 there was facial paralysis, and in 2 a right brachial monoplegia. Convulsions may precede, or, as in Hoppe's case, may follow the development of aphasia. The convulsions are at times unilateral or Jacksonian in type. Hemianopsia has been observed as an occasional accompaniment of aphasia, in association with hemiplegia; amblyopia seems to be more frequent. Hemianesthesia has also been noted (Grenet[18]), but sensory disturbances appear, on the whole, to be rare.

*Duration and Course.*—The uremic paralysis and aphasia may be so fleeting as to be almost overlooked. In the cases of aphasia culled from the literature I find the one of shortest duration to have been that of Daly (No. 6) which lasted only five minutes. The average duration is probably from twenty-four to forty-eight hours, but the condition may extend over a week or more.

*Termination.*—If the patient survives the uremic attack he practically always recovers from the aphasia. The nephritic symptoms may persist after the cerebral disturbances have subsided, but, at times, both disappear coincidently and completely. Some of the most brilliant results from bleeding have been observed in cases

of uremic aphasia and hemiplegia. When paralysis is present it may disappear before, with or after the aphasia.

*Recurrence.*—One peculiar feature is the frequent recurrence of aphasia or hemiplegia noted in several cases, as in those of Baginsky[20] and Lancereaux.[21]

*Lesions in Fatal Cases.*—Even the most pronounced case of uremic aphasia, whether or not it is accompanied by hemiplegia, may, at autopsy, reveal no adequate lesion. The conditions found have been edema and congestion of the membranes and occasionally dilatation of the ventricles. For the most part the brain was virtually intact. In Jaccoud's case (No. 15) there was softening of the white matter in the immediate neighborhood of the third left frontal convolution. The author emphasizes the fact that the convolution itself was not affected, and implies, therefore, that the aphasia was not due to the softening. The article, however, dates back to the early days of cerebral localization, and it is probable that, with our present knowledge, such a case would be considered to be a true organic aphasia, due to a subcortical lesion. I have, however, included it in my list, as the possibility remains that the aphasia, from which the patient had recovered before death, was of the uremic type. In the examples of uremic hemiplegia that I have seen at autopsy, edema and congestion were practically the only lesions, and these could not be held to account for the focal symptoms. So far, microscopic study has likewise thrown no light on the cause, but there is no doubt that a characteristic cellular change will, some day, be discovered.

*Condition of the Kidneys.*—Aphasia and other focal symptoms may occur with any form of nephritis, with either the acute or the chronic, and even with the amyloid; but it seems that in adults the condition is most common in contracted kidney, while in children—as already mentioned—it is especially found in post-scarlatinal nephritis.

## THE ETIOLOGY.

In the pathogenesis two matters require explanation: the uremia *per se* and the focal character of the symptoms. Uremia, as has been stated above, is best explained by the theory that it is due to a poisonous substance or group of poisonous substances in the blood. This is not the place to enter into an extended discussion of the nature of these poisons, nor would such a discussion avail much, since we know entirely too little about the subject. That the poisons are retained metabolic products is very probable; but that urea, ammonium carbonate, potash salts or extractives are the essential agent—one after the other having been so considered—is equally unlikely. Nor can the accumulation of sodium chlorid, as maintained by Bohne,[23] be held to be the responsible factor, as this view has been disproved by the experiments of Hofmann.[24]

The researches of Bouchard[25] on the toxicity of the urine have opened an interesting field of speculation and investigation, but so far its tillage has been disappointingly barren. More promising is the branch of research inaugurated by Koryani.[26] This observer found that there is in Bright's disease a retention of metabolites in the system, this retention bringing about an increased concentration (osmotic density) of the blood. The surest index of this augmented density is the depression of the freezing point, which normally is — .56 C. Although considerable work has been done in this new domain of morbid physiology, the data are as yet too meager to enable us to base an adequate theory on them, but they strengthen the growing opinion that in uremia we are dealing with the retention, not of one, but of several excrementitious substances.

This view, however, leaves us still ignorant of the cause of the strikingly focal symptoms, such as aphasia, hemiplegia, monospasm and Jacksonian epilepsy. *A priori* we should expect the symptoms produced by poisons to be general in character; yet we have analogies showing that the effect of circulating poisons may be local. Thus, the albumin intoxications, as Flexner[27] and others have shown, bring about circumscribed areas of necrosis in the liver, spleen and elsewhere; although the poisons themselves—e. g., ricin, diphtheria toxin, typhoid toxin—are conveyed to the entirety of the organ. It is probable that the focal character of the lesions in these cases is due to changes produced in the walls of the capillaries of the affected regions. We may conceive the uremic poison to act in an analogous manner, differing only in the lesser degree of textural change induced by it. That there is some structural alteration can not be doubted, but it is so slight that careful studies have, so far, not revealed it.

The fleeting character of the paralytic and spastic symptoms strongly suggests the action of such additional factors as anemia and edema, from the effects of which cells can recover as soon as the anemia and edema have subsided. Traube, it will be remembered, sought to explain the entire uremic symptom complex on this theory; but this is not possible with the interpretation given by him. He believed that the higher arterial pressure, which he attributed to hydremic plethora and cardiac hypertrophy, caused a cerebral edema, and this, by pressure on the blood vessels, an anemia. Experiments have failed to corroborate this view.

Some light has been shed on the origin of the focal symptoms by the researches of Raymond,[28] who removed the left superior cervical ganglion from a rabbit, and several days later produced uremia by ligation of the vessels at the hilum of the kidney. Convulsive phenomena ensued, limited to the right side of the body. When the right ganglion was extirpated and the renal vessels tied, convulsions occurred on the left side. In other words, the uremic disturbances manifested themselves on the side governed by the hemisphere, the vessels of which had been paralyzed by avulsion of the ganglion. Raymond believed that the edema was, under such circumstances, greater on the side of the vasomotor paralysis, although at autopsy no difference was recognizable.

If the recent observations on an increased viscosity of the blood in Bright's disease are substantiated, they will give further support to the theory that circulatory changes play a joint part with poisons in the production of uremic symptoms of a focal character. The existence of atheroma is an auxiliary factor of considerable importance, but is not a necessary prerequisite, as Raymond was inclined to believe, for in many cases there is no arterial disease of moment.

Besides uremia there are other toxic agents that can give rise to temporary aphasia. Bastian[29] mentions stramonium, belladonna, cannabis indica, tobacco and opium. Bateman[30] also refers to these, and, in addition, to poisoning by *Oenanthe crocata.* Several cases of aphasia caused by snake venom are likewise recorded, and also one that was due to lead. Of endogenous poisons, diabetes (Bernard and Féré[31]) and gout may lead to aphasia; so may diabetes insipidus, as in the case of Chouppe's (quoted by Wyllie[32]). Finally, we have the infectious diseases, typhoid fever, septicemia, scarlet

fever, measles, etc., which are not infrequently attended by aphasia.

*Diagnosis.*—The principal features in the diagnosis of uremic aphasia, as in other forms of uremic paralysis, are the transitory and intermittent character of the symptoms, the coexisting uremic phenomena and the signs of renal disease. A history of preceding vertigo, headache and visual disturbance; the presence of edema of the lungs or other localized edema, as well as albuminuria, are strongly suggestive. Unless convulsions are present the pupils are usually contracted.

*Prognosis.*—As indicated under the heading of termination, the outlook is by no means always so grave as one would think on first examining a case of this kind. Patients may recover from aphasia and hemiplegia, and the two are not necessarily terminal symptoms.

## CONCLUSIONS.

1. Aphasia may occur in uremia and is at times the sole expression of that state.
2. It may be a precursor of uremic convulsions or coma.
3. It is frequently associated with right-sided motor paralysis, hemiplegic or monoplegic in character.
4. It is usually of a motor type, but may be sensory. There may be word blindness and word deafness. It may be associated with agraphia, even when there is no paralysis of the limbs.
5. It is comparatively frequent in children, particularly in cases of post-scarlatinal nephritis. In adults it may occur in any form of Bright's disease.
6. It is generally transient and has a marked tendency to recur.
7. When paralysis is present the two may disappear simultaneously; the aphasia usually disappears first.
8. The features of uremic aphasia are, *per se*, not characteristic of the causal condition.
9. The most important diagnostic features are the transitoriness of the aphasia and the presence of other uremic symptoms or of signs of nephritis.
10. In every case of sudden aphasia the possibility of its being renal in origin should be considered, and careful studies of the urine and of the system at large should be made with this thought in mind.

## TABULAR LIST OF CASES OF UREMIC APHASIA.

Case 1.—Baginsky:[20] Male, 42. Anasarca, albuminuria, cylindruria, polyuria, high arterial tension, headache, tinnitus, sparks before the eyes, partial convulsions, nausea, apathy—does not answer questions. Improvement in general condition, but answers slowly and stops in the middle of a sentence. No disturbance of vision. Coma ensued; on awakening, patient's speech was disconnected; could not express himself clearly; said "yes" to everything, but understood what was said to him. Had hallucinations. Uremic convulsions. Death.

*Autopsy.*—Brain very soft; pial vessels distended. Brain moist. Lateral ventricles somewhat dilated. Choroid plexus slightly distended. Otherwise nothing abnormal. Kidneys were the picture of atrophic nephritis.

Case 2.—Baginsky:[20] Male, 40. History of lithiasis, hematemesis, enlargement of liver, albuminuria, pyuria, oliguria, slight stupor. Answered questions slowly but properly at first; later could not find the words to say what he wished. Death in coma.

*Autopsy.*—Brain very moist and soft; otherwise nothing abnormal to the naked eye. Kidneys rather large and fatty; pelvis contains a large stone (branching) and many smaller stones; abscess in cortex and medulla. Left kidney like right. No gastric ulcer, as was suspected.

Case 3.—Batten:[33] Male, 32. Albuminuria, cylindruria, ascites, edema, headache, vomiting, sudden loss of speech; only able to say "yes," but understands everything said to him. No paralysis. In a half hour a typical convulsion. Venesection. Return of consciousness, but persistence of aphasia, the latter disappearing after some hours.

Case 4.—Batten:[33] Male, 30. Uremic symptoms for two years; often could not find the proper word and had to stop in the middle of a sentence. At such times could not talk or write a single word. On one occasion an attack of this kind came on while he was delivering a verbal message. Most apt to come on while tired or if he had not passed urine freely. During the attacks he could see to read but not to write. Death.

*Autopsy.*—No brain lesion found.

Case 5.—Bonnet:[34] Male, 43. Alcoholism, gastritis, intense headache, vomiting, anasarca, numbness in left arm, mitral regurgitation, polyuria, albuminuria, hemorrhagic retinitis, choroiditis, sudden incomplete coma, right-sided facial paralysis, aphasia (type not given). Death two days later.

*Autopsy.*—Kidneys, hard, granular and cystic; cortex reduced in thickness; capsule, adherent. Brain, practically normal. Slight congestion. Left hemisphere somewhat depressed over ascending frontal and parietal convolutions.

Case 6.—Daly:[35] Male, 68. Albuminuria, low specific gravity, thickened arteries, aphasia and right hemiplegia lasting five minutes. Two days later (March 13) two attacks. March 14 ten attacks, from ten minutes to an hour in duration. March 15 one attack, lasting ten minutes and three lasting three hours.

Case 7.—Dupré:[12] Male, 9. Scarlet fever, anasarca, sudden anuria, motor aphasia, incomplete agraphia. No sensory aphasia. Paresis of right arm; duration two days; disappeared with restoration of urinary flow.

Case 8.—Dupré:[13] Male, 63. Emphysema, bronchiectasis, atheroma, oliguria, albuminuria. Cheyne-Stokes breathing, myosis, amblyopia, motor aphasia and partial agraphia. No paralysis. Disappearance of aphasia in thirty-six hours. Death two years later. No autopsy.

Case 9.—Elder:[30] Male, 28. Pictorial motor aphasia, temporary in duration and recurring on two occasions, in a patient with albuminuria; complete loss of the power of producing words and even sounds of any kind except groans; complete agraphia. No auditory or visual aphasia. The second attack lasted thirteen hours; the first a little more than a day. Death from uremia.

Case 10.—Grenet:[18] Male, 62. A series of uremic convulsions in the night. The following day conjugate deviation and rotation of the head to the right. Right brachial monoplegia. Sensation normal; intelligence obtuse. The patient understands questions, but is unable to answer.

*Autopsy.*—No brain lesion whatever.

Case 11.—Grenet:[18] Male, 24. Interstitial nephritis, apoplexy, right-sided hemiplegia, hemianesthesia and aphasia. Death in coma. No focal lesion.

Case 12.—Grenet:[19] Male, 46. Albuminuria, coma, right-sided hemiplegia and convulsive seizures in paralyzed side. Head rotated to the left with conjugate deviation of the eyes. Aphasia—type not given. Gradual improvement.

Case 13.—Grenet:[18] Male, 20. Subacute nephritis with albuminuria, anasarca and right-sided convulsions, followed by transitory aphasia and agraphia. Intelligence preserved. Answers correctly by signs; performs actions commanded. Can not utter a sound, but when shown objects and asked by name whether they are this or that answers correctly. Agraphia and aphasia disappear. Two weeks later another attack of uremia without aphasia. Later, death during a convulsion.

*Autopsy.*—Right kidney large; capsule adherent; cortex yellowish. Left kidney smaller; otherwise the same. Heart: hypertrophy of the left ventricle. Brain: nothing beyond some edema.

Case 14.—Hoppe:[19] Female, 62. Sudden aphasia while eating, lasting half an hour. Knows what to say, but is unable to express herself. Aphasia followed by a convulsion and hemiplegia of right side. Complete recovery, except for the albuminuria, in 24 hours.

Case 15.—Jaccoud:[22] Male, 44. Known to have been suffering from Bright's disease. Sudden aphasia with a limited

facial paralysis. Recovery in five weeks. Later, death from the kidney disease.

*Autopsy.*—Fatty degeneration of kidneys. Circle of Willis healthy. Softening of the white matter in the vicinity of the third left frontal convolution. Convolution itself not affected.

CASE 16.—Jocqs:[37] Female, 20. Pregnant at term. Eclampsia. Large quantities of albumin in the urine. Labor. Child stillborn. Coma lessening gradually. Urine contains sugar, as well as albumin. Complete recovery, except for a peculiar mental state, patient remembering nothing of what has happened and being word blind. "Je les voyais (des mots), mais je ne les comprenais pas." On leaving the hospital the patient's urine is normal. Disturbance of intellect has not entirely disappeared.

CASE 17.—Lancereaux:[21] Male, 31. Amyloid disease of the kidneys in consequence of general and articular tuberculosis. Several uremic attacks within two years, always preceded by aphasia and agraphia; sometimes aphasia the only uremic manifestation, coming on especially toward evening or after being tired from exercise or any other cause. Diuretic treatment always improved the aphasia.

*Autopsy.*—Brain presents nothing abnormal.

CASE 18.—Lloyd:[15] Female, 70. Albuminuria and casts. History of asthma and dyspnea; never any paralysis. Arteries atheromatous. After several days' illness almost complete motor aphasia, word blindness and agraphia. Right homonymous hemianopsia; uremic asthma.

*Autopsy.*—Kidneys contracted; left cystic. Brain normal, macroscopically. Arteries, stiff.

CASE 19.—Mann:[38] Male, 35, with signs of renal disease. Convulsions followed by slowness of speech, obtuseness of intellect and right-sided paralysis. Speech unintelligible and inarticulate, but understands everything.

*Autopsy.*—Ventricles distended; left three times the size of right. Brain otherwise normal.

CASE 20.—Monod:[6] Female, 9. Scarlet fever, edema, epileptiform convulsions followed by imperfect convulsive movements and partial coma. Disappearance of coma, motor aphasia remaining. The patient has the appearance of one desiring to respond to questions and moves her lips, but is not able to utter any words. Recovery.

CASE 21.—Raymond:[28] Male, 74. Interstitial nephritis; sudden flaccid paralysis of left side without loss of consciousness, sparing the face. Hemianesthesia; complete motor aphasia. Understands what is said, but can not speak. The following day the paralysis is spastic; no return of speech. Death.

*Autopsy.*—Cerebral edema, atheroma of the circle of Willis; no other brain lesion. Kidneys small and granular.

CASE 22.—Raymond:[28] Male, 62. Interstitial nephritis, loss of consciousness, severe general convulsions, right hemiplegia, ptosis. Intellect slightly obtuse. Understands what is said, but is unable to reply. Death.

*Autopsy.*—Edema of the membranes and of the brain; brain tissue pale.

CASE 23.—Raymond:[28] Male, 85. Interstitial nephritis, right hemiplegia and anesthesia, aphasia. Death in coma.

*Autopsy.*—Considerable edema; vessels slightly atheromatous. No gross lesion of the brain.

CASE 24.—Raymond:[28] Female, 46. Interstitial nephritis with acute exacerbation, uremic coma; later, right hemiplegia. A similar attack eighteen months previously; aphasic in both. Understands questions; unable to reply. Complete recovery from aphasia; persistence, in some degree, of right hemiplegia.

CASES 25, 26 and 27 are given in the first part of this article.

CASE 28.—Rotch:[12] Male, 59. Headache for ten years; occasional nausea; no signs of renal disease. Perfectly well at 9 a. m., December 30. At 10 a. m. aphasia; mind clear; headache; numbness of right hand. No paralysis; no sensory disturbance. By evening delirium; answers "yes" to everything; loud souffle over precordia; pulse full, tense, 120; slight fever; albuminuria; casts; scanty urine. Complete recovery by January 12, including disappearance of albumin and casts. Rotch believes the case to have been due to embolism, but, taken in connection with Rendu's, I am inclined to consider it uremic.

CASE 29.—Rotch:[12] Male, 45. An attack of aphasia three years before and some disturbance of vision. Complete recovery in a few days. February 21, while perfectly well, developed motor aphasia; no paralysis; no disturbance of sensation. Polyuria; increased arterial tension; vision disturbed; hearing good; agraphia. February 25, writing perfect; mind clear; disappearance of aphasia.


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## DISCUSSION

ON PAPERS OF DRS. ELLIOTT, HERRICK, KELLY, BISHOP, RIESMAN.*

DR. FRANK BILLINGS, Chicago—Inasmuch as Dr. DeLancey Rochester is not here I will confine myself to that part of the subject he was expected to dwell on and speak of the treatment of chronic nephritis. As already stated by Dr. Herrick, probably the best classification of chronic nephritis, for clinical purposes, is, 1, chronic interstitial nephritis and, 2, chronic diffuse nephritis, the one being attended with contracted kidney and great cardiovascular changes and, in consequence, hemorrhages in the late stages of the disease, especially of the brain, with uremia and a breaking down of the heart integrity. In the other there is a tendency to fatty changes in the different organs of the body with a weakness of the blood vessels, with a tendency to anemia and a greater tendency to early uremic conditions, to serous inflammations of the pericardium, pleura, etc. Sometimes we may be able to separate these great divisions one from the other, yet we may sometimes be mistaken and a case which we think to be one of chronic diffuse nephritis, with pasty, pallid skin, with absence of cardiovascular changes, may show at autopsy to be of the other class. These two classes of chronic nephritis require different lines of management. In the interstitial form we should endeavor to maintain the cardiovascular integrity. So long as the heart is good, and the urinary output is good, even though it is of low specific gravity and total solids not to

* The papers of Drs. Elliott and Herrick appeared in THE JOURNAL October 4.

the normal, the prognosis is good. The excretions from the body, other than by the kidneys, should be looked after, especially the gastrointestinal tract. In this form the anemia is not so apt to be progressive or marked and, consequently, the nutrition of the patient is not so important as it is in the other form; yet the nutrition must be guarded.

In the other class of cases we must also be on guard against the cardiovascular changes and we should look to the excretion from the body through other emunctories than the kidneys. In this form the nutrition must be looked after, for here anemia is more apt to occur. Therefore, hematinic restoratives are required. On these principles of treatment there should occur no errors in judgment in the management of these cases. So soon as a diagnosis of Bright's disease has been made the vast majority of persons order the well-known mixture of digitalis and some diuretic preparation of sodium or potassium, with iron. Each case should be studied separately. If the heart integrity is breaking down, digitalis may be indicated. In another perhaps some of the saline diuretics may be indicated. If the blood is not good, iron may be indicated for a time. I was impressed four or five years ago by an article of Dr. Tyson's on the use of iron in Bright's disease; the mixture suggested was Basham's and it was stated that it was administered without regard to the blood condition of the patient. Iron may be indicated in Bright's disease, but only when anemia is present or the nutrition of the patient is bad. The nutrition of these patients should always be carefully looked after, and the dietary treatment is one of the most important in Bright's disease. One can not select any individual treatment. The milk treatment is one of the best for a certain class of cases, especially where a low diet is necessary. That principle of treatment is recognized by quacks who give a few nuts, and attend to the excretions by ordering much water drinking.

On the other hand, it may be necessary to overfeed the patient who is suffering from Bright's disease; it is not always necessary to take beef away from a patient because he may need it. I want to call attention to this fact: that I do not believe there is any greater amount of poison in a piece of beef than in a corresponding amount of chicken, provided the patient needs that particular variety of food. The nutritional treatment is of great importance. Washing out the body by drinking milk, or other fluid, is one of the most important needs; the medical treatment, while important, is secondary and should be selected.

DR. T. B. FUTCHER, Baltimore—I wish to confine my remarks chiefly to cases of chronic interstitial nephritis and the relation they bear to the condition of the blood and vascular system, and also to refer briefly to the statistics with regard to cases of nephritis admitted to Dr. Osler's wards of the Johns Hopkins Hospital and to the cases which came to autopsy in Dr. Welch's laboratory. In twelve and a half years, up to June of this year, 13,900 medical cases were admitted to Dr. Osler's wards, and of this number 590 suffered from nephritis. The nephritic cases constituted, therefore, 4.2 per cent. of the total medical admissions. Of these 590 cases admitted, 42 only were acute, the remaining 548 cases being chronic. The 548 cases include both the interstitial and parenchymatous cases. Of the first 1000 autopsies in the pathological department 314, or 31.4 per cent. showed nephritis; this shows the prevalence with which nephritis is found at autopsy. All these cases were not sent to the pathologic laboratory with a diagnosis of nephritis, the patients in many cases having died of some other disease. I started to look up the statistics particularly with reference to determining the percentage relationship between the contracted kidney due to general arteriosclerosis and the contracted kidney due to other causes, but I am sorry that time did not permit of a careful analysis.

Of these 314 cases of nephritis there were 286 of chronic nephritis. This included the chronic interstitial and chronic parenchymatous forms; 24 chronic cases were diagnosed specifically as arteriosclerotic kidney, i. e., kidneys with chronic interstitial nephritis secondary to general arteriosclerosis, or 12 per cent. of all chronic nephritic cases. I have no doubt but that a great many of the remaining cases of chronic nephritis will, when carefully studied, prove to have been of arterial origin, although a specific statement to this effect is not made in the anatomic diagnosis in the autopsy records. I think that I am right in stating that Dr. Osler is of the opinion that arteriosclerosis is much more frequently a cause of chronic nephritis, i. e., contracted kidney, than is generally supposed. The arteriosclerotic kidney does not show the same grade of atrophy the kidneys of interstitial nephritis of other causes do. The kidneys are apt to be comparatively large, red and beefy in appearance. They are very firm, cut with difficulty and frequently present numerous large depressions on their surfaces. As Dr. Herrick has said, there is great difficulty in differentiating the varieties of chronic interstitial nephritis and I think that an examination of a series of cases will show a material difference in the general macroscopic and microscopic appearances of the small kidney due to primary arterial disease and the ordinary kidney of chronic interstitial nephritis. The condition of the urine in the two varieties of cases differs somewhat. In the arteriosclerotic form the urine is either normal or reduced in amount instead of being increased. The specific gravity is normal or high, the color good and the urine generally contains more albumin than in ordinary interstitial nephritis. The prognosis of the renal condition in an arteriosclerotic kidney does not so much depend on the condition of the kidneys themselves as on the condition of the heart and general vascular changes.

I think it is very important that the prevalence of extensive arteriosclerosis in elderly people should be kept in mind. While Dr. Bishop and Dr. Riesman were reading their papers it occurred to me that possibly a number of the conditions they recorded were due to primary arterial disease rather than to the condition of the kidneys. For instance, in arteriosclerosis it is not uncommon to find a temporary aphasia, lasting a few minutes or hours, or possibly a day or two, which entirely clears up. Within the last two or three years I can recall three cases occurring in the Johns Hopkins Hospital wards in which there were attacks of temporary aphasia lasting but a few hours which cleared up entirely. From the history of these cases, and the physical examination, it seemed most probable that the aphasia was due to vascular disturbances in the brain rather than from any toxic action resulting from disease of the kidneys.

With regard to the treatment, I should like first to emphasize the importance, in uremic coma, of the intravenous injection of salt solutions. During the last three years I recall three cases of severe uremic convulsions treated in this way. Venesection was first performed, the amount of blood varying from 300 to 600 c.c., according to the condition of the pulse in each case. Then 1000 c.c. of normal salt solution was allowed to flow slowly into the vein. The intravenous injections may be repeated, and it is well to follow the injection by a sweat-bath. All the three cases thus treated recovered from the convulsions and became as well as they were ordinarily, considering their condition. I think the use of this normal salt solution of great importance in the treatment of this complication.

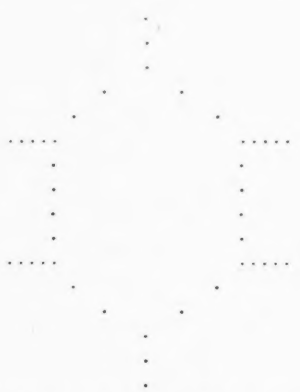
I should like to refer briefly to a treatment which has recently been suggested and adopted by Edebohls in cases of chronic nephritis, namely, decapsulation of the kidneys. Dr. Edebohls has reported a series of cases of chronic nephritis in which this treatment was adopted with advantageous results. I do not think sufficient time has since elapsed to draw any very definite conclusions regarding the advisability of this operation. The operation has been performed twice recently by Dr. Halstead in the surgical department of Johns Hopkins Hospital. The first case was operated on two months ago. It was a case of chronic parenchymatous nephritis which first came under observation three years ago, with general anasarca, etc., following exposure to cold. He entered the hospital again four months ago and, under the usual line of treatment, the anasarca cleared up. The patient continued to have from 0.6 to 0.8 per cent. of albumin in the urine and an operation was suggested and the patient, a boy 19 years old, consented to it. Both kidneys were stripped of their capsule. The wound healed readily and the patient was about in two weeks'

time. He is better and states that he has not felt so well for years. The percentage of albumin has been materially reduced. The second case, operated on about two weeks ago, is doing fairly well. The patient was a girl of 15 years with a chronic parenchymatous nephritis. Of course, I can not yet say what results will follow in this instance. The benefit arising from this operation is supposed to result from the increased vascularization of the kidney which results from the stripping off of the capsule. The operation is still in its experimental stage and we must await fuller statistics before making any definite statements regarding it.

DR. V. C. VAUGHAN, Ann Arbor, Mich.—I have listened with great pleasure and profit to the valuable papers read this morning on nephritis and I know they will constitute a valuable contribution to the literature of this subject.

I am not altogether satisfied with the diagnosis of the case made by Dr. Riesman; he may be right, but I feel quite convinced that there was no justification for him to say that the aphasia in this case was uremic, because we meet with other cases, identical with this one he has described, in which there are no evidences of any structural disease of the kidneys. It has been my fortune to see two or three of these cases which were very pronounced, and in one there were frequently recurring attacks of aphasia; in this case I have studied the kidneys and blood and find no evidence of nephritis. All that can be said of these cases is that there must be spasm of the arterioles of the brain, probably toxic in origin. That it is always accompanied by Bright's disease I do not believe.

Uremia has become a word which means almost anything. I want to say a few words in description of the theory which gives me a better conception of the changes in the kidneys than anything else. I should say that Bright's disease is always due to toxic causes. The toxins which cause Bright's disease may be designated as nephrolysins. The action of these nephrolysins will be better understood by a study of Ehrlich's side chain theory, the greatest theory advanced in medicine. Let us take the benzene ring, with six side chains and so represent the chemical composition of the kidney cell, thus:



A nephrolysin is any substance which will split off one of the side chains. We know some of the substances which will do this; for instance, chromate of potassium. We can produce Bright's disease in animals by increasing doses of this drug. The side chains of a kidney cell are the components that permit of the proper function of the kidney; with the side chains normal the kidney excretes normally. Another thing we should know is that the side chain, which is cut off, is poisonous to other tissues of the body. If you take an animal and induce Bright's disease by the use of chromate of potassium you then can take the blood serum from that animal and inject it into another animal and it will be poisonous to that animal on account of the substance that the chromate of potassium has split off from the kidney cells. Nearly all cells of the body can so be split up and produce a toxin which, when injected into another body, will poison its cells. We are now on the threshold of the autogenous diseases. Nephrolysins may be divided into certain classes, but more particularly into heteronephrolysins, i. e., when the poisons which injure the kidney are introduced from without, and idionephrolysins, i. e., poisons generated within the body. Again, we may have, 1, bacterionephrolysins of bacterial origin, and 2, autonephrolysins of digestive origin. The bacillus of diphtheria produces a toxin which affects the kidney; a child with scarlet fever produces a bacterionephrolysin and so we have a scarlatinal nephritis. On the other hand, there are certain autonephrolysins, i. e., those due to disordered nutrition, in which the cells are injured by poisons in the body. When we get a real classification of Bright's disease it will be one that is founded on its etiology. At present we can not have one, but from the fact that we have morphologically and pathologically definite forms of Bright's disease leads us to the inference that there are two or three classes of nephrolysins. It seems to me that this way of looking at it may possibly be of benefit and it certainly gives me a better idea of nephritis and holds out a better hope of getting at the bottom of the thing.

DR. N. S. DAVIS, JR., Chicago—The possibility of classifying cases of nephritis properly seems as remote as it did some years ago. We have made no advances in this direction, probably because we do not understand fully the causes of diseases of the kidneys or the chemical changes that take place in their cells and that create the gross anatomic changes which we do know. Such changes as Prof. Vaughan has described to us we need to understand and until we do there can be no great advantage made in our knowledge of renal diseases.

I wish to thank Dr. Herrick for emphasizing the point that, so far as clinical methods make a diagnosis possible, an intermediate form of nephritis must be recognized, one that presents a commingling of the symptoms of chronic interstitial and diffuse nephritis. When we see cases once, or possibly twice, only, it is impossible to study each individual so as to be able to say that he belongs to the group of interstitial or diffuse cases, therefore he must be placed, at least temporarily, in the intermediate group. If we are able to watch an individual long enough I think we can almost invariably determine to which group he belongs. From the standpoint of prognosis, so far as our knowledge at present enables us to make a prophesy, it is very important to be able to say whether the case is one of interstitial or diffuse nephritis. However, from the standpoint of treatment it is much more important to determine with accuracy what is the functional power of the structures of the kidney; whether the glomeruli are capable of eliminating a sufficient amount of fluids from the body, and whether the epithelium of the convoluted tubules can eliminate the solids of the urine. These two points are of greater importance from the standpoint of treatment than a knowledge of the anatomic changes which are taking place in the kidneys. Moreover, we can determine the functionating power of the kidney by a careful examination or by repeated examinations.

I have met rather frequently a group of cases which seem to puzzle many practitioners. These are cases that frequently are first discovered by the life-insurance examiner. He finds albumin in the urine, sometimes a considerable quantity. But apparently the patient is in good health. There is no edema and there are no arterial changes characteristic of Bright's disease, in spite of the constant presence of large quantities of albumin in the urine. In these cases the quantity of urine excreted is normal, and the amount of solids excreted is normal; apparently the functions of the kidneys are not disturbed. These are cases in which unquestionably a large number of the glomeruli are so injured that they permit albumin to escape into the urine, while other glomeruli not affected produce an abundance of urine. In many instances I have watched these cases for long periods of time; little by little there occurs a lessened elimination of urine and symptoms of a chronic diffuse nephritis develops. These are undoubtedly cases of diffuse nephritis. They are easily distinguished from cases of interstitial nephritis in which there is no considerable disturbance of general health, but a large output of urine containing only a small quantity of albumin; whereas, in this group of cases there is a large amount of albumin present in the urine as well as a large amount of urine excreted. Moreover, the disease often occurs earlier in life than does interstitial nephritis. In

both groups of cases there is a small amount of sediment and few casts in the urine.

With regard to treatment, I want to emphasize what has already been said, that more attention should be given to the condition of the gastrointestinal tract and to the elimination that takes place through it than is commonly given. Probably most of you have had the same experience that I have had and have observed in your hospital practice very many cases which, when they first enter, void urine containing a few casts and a small amount of albumin. The presence of these abnormal ingredients of urine shows an irritation, or disturbed functionating power of the kidneys, which lasts only a few days, disappearing when the patients are placed on a suitable diet and are placed at rest. I have observed in these cases, and I presume the rest of you have, that improvement has been uniformly brought about by cleansing the gastrointestinal tract, removing from it material which, if absorbed into the blood and eliminated by the kidneys, would directly irritate them. I wish to emphasize the fact, that chemicals are constantly produced in the intestines by abnormal fermentation, which, when absorbed and carried by the blood to the kidneys to be eliminated, are injurious to them. Therefore, whenever we have to do with cases of nephritis it is all important that such irritating and destructive product should be eliminated from and by the intestines as fast as possible and the gastrointestinal tract should be kept as clean and its contents as free from abnormal fermentation as possible; this is really the successful treatment of such cases. In both acute and chronic nephritis, especially in those cases in which the amount of urine excreted during the twenty-four hours is diminished, a milk diet is of the greatest importance both because milk does not ferment in the gastrointestinal tract so as to produce those ingredients which irritate the kidneys when they are eliminated and because it is an important diuretic.

In cases of chronic nephritis, in which there is an abundance of urine and good excretion of the nitrogenous or solid matters, it is often harmful to restrict the patient to a milk diet. Indeed, it is not always important to restrict the diet closely. In prescribing diet in those cases we should be guided by the ability of the patient to digest and assimilate food. Some patients will do well on a nitrogenous diet. When they eat a moderate amount of meat, they seem to improve in general health, vigor and strength. On the other hand, a larger proportion of cases, when placed on such a diet, will eliminate an increasing quantity of albumin in the urine and develop other symptoms of gravity. In other cases farinaceous foods can be given with benefit. It is often best to avoid mixtures of foods in the stomach; therefore, at one meal chiefly or exclusively farinaceous foods should be given and at another proteids or fruits. Food should be such as can be rapidly digested, perfectly absorbed and utilized, and as little if any retained in the intestines to ferment or putrefy. This is really the key to the proper adaptation of diet to individual cases of nephritis.

DR. JOHN A. MCKENNA, Philadelphia—I should like to report two cases of acute nephritis caused, I believe, by the invasion of the kidney by the *Oxyuris vermicularis*. These are the only cases in which I feel sure the nephritis was caused by the seat-worm, although I found ovi in the urine of another case. In the microscopic examinations of these cases the chance of the eggs being washed from the orifice of the urethra, the labia or the bladder walls was excluded, for repeatedly were the bladders flushed with antiseptic solutions before the urine in which the eggs were found was drawn. In neither of these two cases did the nephritic symptoms clear until the patient had been purged with anthelmintics. After such purging I drew the urine from the bladder and found immotile eggs of the seat-worm and in one instance a dead female worm. I wish to record these cases now simply as a preliminary report.

DR. WILLIAM BAILEY, Louisville, Ky.—The papers and the discussions on them this morning constitute a valuable contribution to the literature on nephritis. I also wish to emphasize what has already been stated, that it is the individual who is the subject of the disease that is to be treated rather than the organ involved. This is very important because the organ is an eliminating organ, and is for excretion only. While we have not learned very much with regard to the etiology or the pathology, or the classification of this disease, I think that, on consideration, you will find that it is not often that there is disease of the kidneys alone. Take a cirrhotic kidney with alcohol as the cause; alcohol will not make a cirrhotic kidney unless there is evidence of increased development of connective tissue elsewhere in the body. When the kidneys are not doing their duty there are other organs in the body which take on additional work and so take care of the patient; the skin, the lungs, the liver and the alimentary canal are of particular importance in this respect, lessening the work ordinarily placed on the kidneys. The diet should be so managed as to give the best possible nutrition with the least possible danger coming from any retention of toxins. I think that much can be done by a further study of these nephrolysins which give trouble to the kidney.

DR. E. F. WELLS, Chicago—I wish to emphasize the fact that the danger in chronic interstitial nephritis lies in the residual poisons which lie without the blood vessels, and that the uremic disturbances are due to disturbances in the circulation, which permit the flow of these poisons into the general circulation and their transportation to the brain. Every advanced case of chronic interstitial nephritis is bordering on uremia; that can be proven clinically to the satisfaction of every man who bleeds and examines the blood of his patients. In some cases the urea in the blood may be as high as 0.4, 0.5, 0.6, or even 1 per cent.; it is always high and no matter what is done for the patient it will remain high.

One point with regard to the effect of muscular exercise on the elimination of the solids by the urine. I can best illustrate this by mentioning the case of a gentleman whom I have carefully observed for several years, with chronic interstitial nephritis. In this patient the quantity of urea and solids have been at times so diminished that he excreted only 50 grains of urea in twenty-four hours. On one occasion, when the excretion of urea was at the lowest, he became acutely delirious, with the most violent muscular movements for about thirty-six hours, and during this time more than 500 grains of urea were excreted in twenty-four hours—a larger amount than has ever been excreted since the patient came under observation. Taking this as a hint in the management of these cases (during the past I have always advised that the patients be kept quiet), I have since, as a rule, advised my patients of this class to take active or passive muscular exercise, with the effect of constantly increasing the urea output to a noticeable, even considerable extent, and always with benefit. In addition, there has been a slight diminution of urea to be found in the blood.

During the past few years a number of cases of transient and recurring aphasia, occurring in nephritis, have come under my observation. I can not believe that they are of extreme rarity in nephritic conditions—which opinion was also that of the late Dr. Purdy. In one case, a robust man under 50 years of age, who had always been actively employed, and who was so well that in twenty years' time he had not lost a day from his business, was taken one Sunday with transient aphasia; within twenty-four hours he was in uremic convulsions and died.

DR. H. A. WEST, Galveston, Tex.—I wish to call attention to one phase of the subject in relation to the prognosis in chronic Bright's disease which has not been mentioned in the discussion, and which I do not recall having noticed in the literature on this disease. Living in a locality where chronic nephritis in all its forms is exceedingly common, I have observed quite a number of cases of well-defined chronic Bright's disease occurring in young adults entirely recover. In seeking for an explanation of this fact I have been led to the conclusion that this departure from the otherwise universal law that the disease sooner or later ends in death, is due to the possibility of a separate and reproductive process taking place in the cells of the kidneys as a part of the general rapid evolution and growth of the tissues incident to childhood and young adult life. In regard to the general applicability of a milk diet in Bright's disease, I wish to suggest one precaution,

viz., the necessity of avoiding constipation, owing to the non-use of foods which have a laxative effect and the small amount of residuum left in the bowels to excite peristalsis while on such diet there is a very decided tendency to imperfect intestinal elimination. Under such circumstances in addition to abdominal massage, and such muscular exercise as the patient can stand the laxative mineral waters and saline purgatives are frequently required to secure sufficient intestinal cleanliness and elimination.

DR. JAMES TYSON, Philadelphia—I am inclined to believe that too much importance is attached to interstitial changes as primary in chronic interstitial nephritis. I believe the changes, even in this form, may be primary to the parenchyma and as secreting substance of the kidney is destroyed it is replaced by connective tissue. Nephritis is a toxic disease so far as its etiology is concerned. It appears to me, therefore, perfectly rational to suppose that the changes begin in most cases in the parenchyma because it is on the parenchyma that the poison first spends its force, and that as it is destroyed it is replaced by interstitial tissue.

I wish to refer also to Dr. Riesman's paper and the discussion relating to it. It may be that we are disposed to exaggerate the frequency of these instances of cerebral symptoms due to uremia. But that they do occur I can attest from my own experience. Analogous conditions occur in diabetes mellitus where the same symptoms are produced by accumulated toxins in the blood. Symptoms of aphasia and the motor phenomena described are quite often met in diabetes mellitus and from a similar cause. How this cause operates we do not know, but it may be by producing vascular changes of transient character.

I wish to speak of one point more, growing out of Dr. Davis' remark that in the cases of albuminuria without other symptoms it may be that a certain number of glomeruli are defective and so allow a leakage of albumin, while there are enough left to maintain the functions of the organ. But what of the cases of albuminuria in adolescence? In both boys and girls between the ages of 14 and 21 years there may be more or less albuminuria without other symptoms; as they approach maturity it disappears. It almost invariably happens that this albuminuria disappears entirely and if the normal albuminurias, as they are also called, are due to this cause, we must suppose that ultimately the useless glomeruli are replaced by normal kidney structure.

DR. R. F. WEIR, New York—This subject of chronic nephritis has attractions for the surgeon in considering the newly proposed operation of decapsulation of the kidney with the idea of getting more blood into the organ. Experience with this treatment is as yet small, but I wish to increase the reports already made by two cases, one operated on by Dr. Bull and the other by myself at Roosevelt Hospital, New York. Dr. Bull's case of enlarged cirrhotic kidney—decapsulated on both sides—showed a marked improvement. My own case was in a negro who had had renal trouble for a considerable period of time with a marked anasarca and dyspnea. The capsule was removed with difficulty from both kidneys. In both cases an expedient was resorted to with advantage. In order to diminish the damage from the prolonged use of the anesthetic we resorted to this plan, i. e., had two surgeons to work on the patient at the same time. I took one side and my assistant took the other. The lifting out of the two kidneys beyond the skin level and their decapsulation, replacement and suturing of the wound only by this method occupied less than twenty-five minutes, without apparent detriment to the patient. In the case under my care there was no improvement at the end of three months following the operation; in fact, the patient now is worse than before. I confess I am yet skeptical as to the propriety of applying this procedure to these cases. The analogy between a cirrhotic kidney and a case of cirrhosis of the liver does not, I think, hold good; the renewed blood supply to the liver is of importance to the circulation beyond it even though the liver itself is not benefited thereby. It has not been shown in the liver in the successful cases of Talma's operation that the liver function has been thereby improved. It requires a large number of successful cases to show that damaged renal cells improve in function under an improved blood supply. Experience, however, when ample, will decide about this.

DR. S. C. GORDON, Portland, Me.—One year ago I operated on a patient who was suffering from a movable kidney. A few months after I removed the appendix and, two months later, the left kidney was opened. The physician who sent this patient to me had detected the kidney below the ribs. The patient had great pain; there were albumin and casts in the urine, and she was secreting but eight ounces in 24 hours. One week ago last Monday (June 3) I operated,* decapsulated and lifted the kidney; it was found to be twice its normal weight and was horse-shoe in shape. I fixed the kidney, which was found to be extremely movable, by stitching the capsule to the muscles and fascia. Within three days her heart symptoms improved; she has needed no anodyne since the operation. The day before I left (Monday) it would have been extremely difficult to detect any serious trouble with the heart; the hypertrophic condition and strong beating has ceased and everything pointed to a favorable result in her case. The kidney bled much after cutting the capsule and I think that had much to do with the relief which she experienced. Dr. Edebohls reported ten cases operated on by him ten years ago for floating kidney; in every case there was present Bright's disease. Six of these patients absolutely recovered from their Bright's disease. He is now operating for Bright's disease alone, and certainly with marked success.

DR. A. PALMER DUDLEY, New York—The remarks made by Prof. Weir brought to my mind a procedure which will lessen the dangers produced by the administration of a general anesthetic. It has been my privilege in the Harlem Hospital, New York, where I do general surgery, to do much of the general surgery that is required below the diaphragm under the influence of spinal anesthesia. I have had sufficient experience with this method to be able to state positively that spinal anesthesia, using a 2 per cent. solution of sterilized cocain, will last from twenty minutes to one hour and a half. I have operated for abscess of the liver, for shot wounds of the abdomen, and many other conditions below the abdomen, using the spinal anesthesia with success. This method can not be employed for operations above the diaphragm. In cases of Bright's disease where it is proposed to submit the patient to the surgical procedure of decapsulating the kidney, the safest method is by spinal anesthesia.

DR. DAVID RIESMAN, Philadelphia—Dr. Vaughan has questioned the nature of the case reported by me, and I desire to say that I do not wish to be understood as stating that all cases of temporary aphasia are due to uremia. In my paper, I have a section—which, together with much other matter, I had to omit, for lack of time—in which I deal with the other causes of transitory aphasia, and mention diabetes mellitus, lead poisoning, belladonna intoxication, etc. But there can be no doubt that the case reported by me was one of uremic aphasia. As I have stated in my paper, the blood vessels naturally participate in the production of the condition, and vascular changes, functional or organic, help to account for the focal character of the symptoms.

* Dr. Gordon writes later: "July 3, one month later, the patient returned to her home very much improved in every respect, although there were several days during the convalescence when she secreted but one or two ounces of urine. Before leaving for home she was secreting a normal amount and all the other symptoms were favorable for permanent recovery. I believe the operation promises much for this serious disease, and principally from the relief it gives to the passive congestion of the kidney."

**Quinin as a Dressing.**—Dr. J. Reid (*London Lancet*) has used a mixture of 1 dr. of quinin and 8 fl. oz. of emulsion of cod-liver oil as an application to ordinary ulcers, and to those of rheumatic and syphilitic origin; also in a case of gangrene of the skin, and after a burn, where a large surface, about a foot square, formed a slough which had to be removed on account of ulceration. All wounds took on a healthy appearance after the application. The mixture also acted well in intertrigo and eczema.

# IMPROVED TECHNIC OF AMPUTATION AND TREATMENT OF THE STUMP IN APPENDECTOMY.

JOSEPH RILUS EASTMAN, M.D.
INDIANAPOLIS.

After the separation of adhesions binding down the appendix and ligation and splitting of the meso-appendix, the surgeon comes to the most important steps in appendectomy, namely, the abscission of the appendix and the disposition of the stump. By many operators the meso-appendix and the neck of the appendix are, as is well known, tied wtih strong silk ligatures, cut off and the stump of the appendix is cauterized with pure carbolic

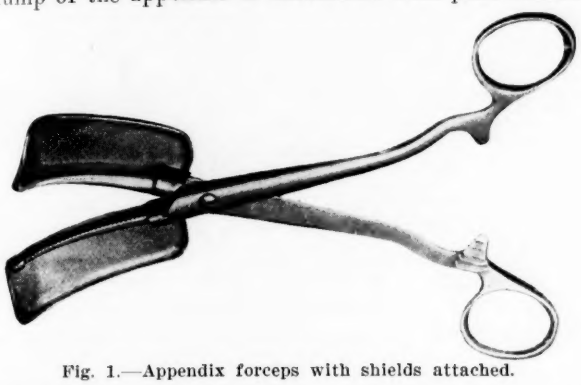


Fig. 1.—Appendix forceps with shields attached.

acid and invaginated into the coats of the colon by Lembert sutures. Another popular method is that of turning down a cuff of peritoneum, pulling up the other coats, ligating these at the base, abscissing, permitting the musculo-mucous stump to retract and suturing the peritoneal cuff over the stump. This is well known as Barker's method, and is used with slight modifications by Kelly, Deaver and others.

Many surgeons prefer not to ligate the mucous membrane, but simply to cut the appendix across, closing the distal end with a clamp or ligature and compressing the proximal end with the fingers, then invaginating the stump into the cecum and securing the whole with the purse-string or Lembert suture. When this method is used, particularly if the tissues be much thickened, there is liability of escape of the contents of the cecum or appendix, or both, into the peritoneal cavity during the operation.

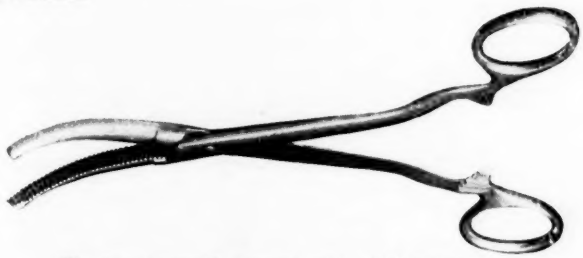


Fig. 2.—Appendix forceps with shields detached.

Joseph Eastman applied a light clamp to the base of the appendix and removed the appendix by cauterization. He invaginated the stump with four or five Lembert sutures placed in position, while the clamp yet held the base of the appendix and prevented the escape of the contents of the intestine. The stump was invaginated by the tightening of the middle ligature simultaneously with the withdrawal of the forceps.

Deaver describes his technic as follows: "The meso-appendix is to be tied off and cut away from its appendiceal attachment. This as accomplished by transfixing its base by a small pair of forceps. A piece of catgut is engaged in the jaws of the forceps, which are then withdrawn and with them one-half of the catgut ligature. After tying the ligature the meso-appendix is cut away with a pair of scissors. A circular incision is now made through the serous coat of the appendix one-quarter of an inch from its junction with the cecum. The serous coat is next stripped back toward the cecum, leaving a cuff of peritoneum, after which the appendix is ligated with silk and the organ removed. The mucous membrane of the stump of the organ is curetted and antisepticized with a solution of mercury bichlorid and carbolic acid (1:4000 and 1:60 respectively). The serous coat is stitched with a fine needle and silk over the stump thus left. The stump now covered with peritoneum is invaginated into the wall of the cecum with continuous Lembert sutures." Deaver adds that "when the appendix is gangrenous or friable, or is involved in inflammatory lymph, we have to content ourselves with a simple ligature, taking in all coats of the organ. The stump thus remaining should, if possible, be invaginated into the cecum."

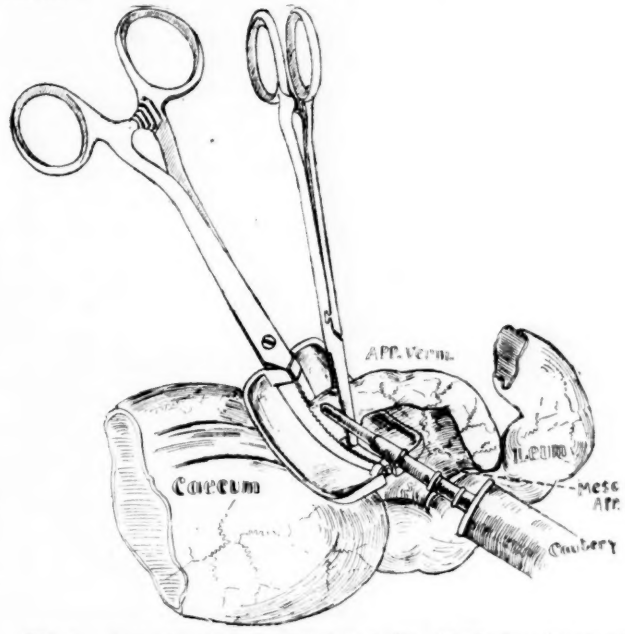



Fig. 3.—Appendix forceps with detachable shields for the arrest of pus and intestinal contents from appendix verm. and for the protection of intestinal serosa from the heat of the cautery.

McBurney, after cutting away the appendix as usual, holds the edge of the stump with forceps. The permeability of the short canal is determined with a probe. A fine point of the Paquelin cautery is then pushed in so as to destroy the mucous membrane nearly to the colon and a fine catgut ligature is tied about the stump within the cauterized area. The button of the stump beyond the ligature is then reduced with scissors to very small proportions and its surface freshly cauterized.

Some operators prefer pure carbolic acid to the Paquelin cautery for the destruction of the mucosa of the stump.

Dawbarn (Dennis' System of Surgery) passes a purse-string suture of silk through the superficial layers of the cecum one-fourth of an inch distant from the base of the appendix. It is first placed but not tied. The appendix is cut off, leaving the stump about half an inch long. The canal of the stump is dilated with fine forceps and the stump is invaginated into the colon. The purse-string suture is now tied, the forceps used for invagination being withdrawn at the moment of tying. An objection to the purse-string suture consists

in the fact that where it is alone used reliance is placed on a single thread which, if it breaks or cuts out, may permit leakage. It should therefore always be reinforced by Lembert sutures.

Whatever the method employed, the operator seeks, as has been observed by Howard Kelly, to accomplish two things, the prevention of contamination of the surrounding tissues with bacteria or pus from the lumen of the appendix or intestinal contents from the cecum and to prevent injury to the intestines, large and small. It can hardly be denied that the removal of the appendix by the application of the cautery between the jaws of the two pairs of light clamps vouchsafes more protection against infection of the peritoneum than simply cutting off with the scissors or knife. When the stump is thick and rigid and much disorganized, invagination may be impractical, in which case annihilation with the cautery with accompanying destruction of bacteria will leave a condition of affairs more favorable for prompt healing than may be produced by depressing the dangerously infected stump into the wall of the colon (instead of into the lumen of the latter), in which case drainage of the septic stump into the colon may fail to occur.

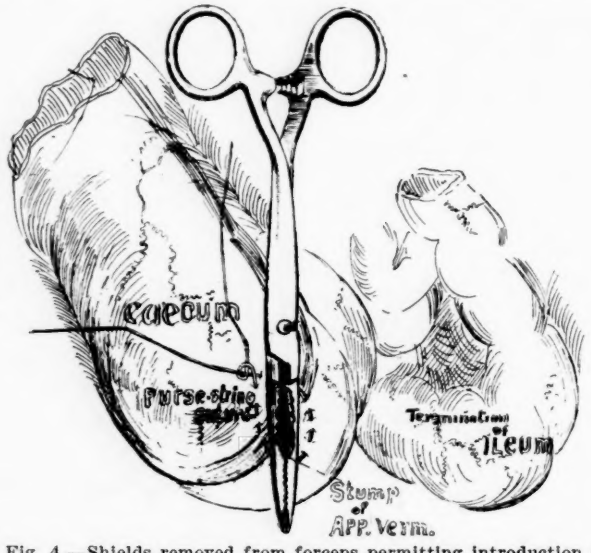



Fig. 4.—Shields removed from forceps permitting introduction of purse-string suture. (After Dawbarn.) Suture is inserted before the removal of forceps.

Kelly further observes that "in some cases where there is extensive suppuration of the appendix, or where its peritoneal coat is friable, it may be impossible to obtain a peritoneal envelope for the stump. Where this can not be effected, he says, "it is better to throw a silk ligature around the entire appendix, tying it tightly, and then to cut it off beyond the ligature, sterilizing the end and covering it with the peritoneum by suturing a fold of the colon over it."

An objection to tying a circular ligature about the base of the appendix either internal or external to the serosa, is that such a ligature having been applied does not permit of exploration of the canal of the stump for the purpose of determining whether the same is patulous. If a ligature is thus applied beyond a stricture the operator will, as McBurney has stated, reproduce the conditions liable to produce a fresh attack. After the abscission is made the probe should always be passed "through the base of the appendix into the colon to determine that natural drainage for the stump will exist. If the canal is not pervious the interior up to the point of stricture should be dissected out or cauterized before suture or ligature is applied." The use of a light clamp permits exploration of this canal. If two light clamps are used and the appendix is severed between the jaws of the clamps with the Paquelin cautery, the danger of the escape of pus, fluid intestinal contents, fecal concretions or other infectious material into the peritoneal

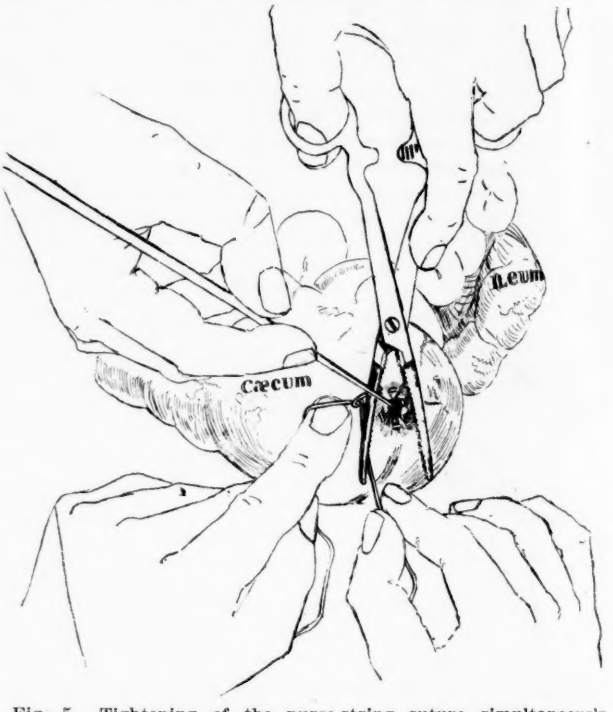



Fig. 5.—Tightening of the purse-string suture simultaneously with removal of forceps and invagination of stump.

cavity is greatly reduced. If the author's special clamp, shown in the illustration, be used, all material escaping from the appendix on severing it with the cautery will be caught in the shields which are at the sides of the

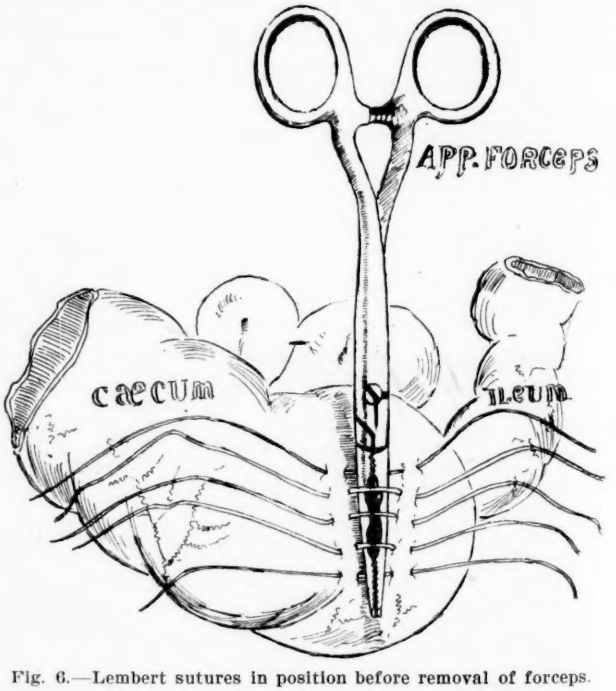



Fig. 6.—Lembert sutures in position before removal of forceps.

forceps jaws. These may also be appreciated for their value in holding back obtrusive coils of small intestine and portions of omentum out of the range of the heat of the cautery. No matter how accurately gauze sponges are arranged about the base of the appendix, they can hardly

protect the peritoneum from the heat of the cautery or from contamination with the contents of the appendix as can these shields.

After the separation of the appendix the shields may be very easily removed. No jerking is required. The slightest traction releases them. After they have been displaced the base of the appendix is held in a simple light clamp. It is now readily possible to introduce the purse-string suture, after Dawbarn's method, or the Lembert sutures, after the method of Joseph Eastman, the forceps remaining in place and preventing escape of infectious material until the purse-string suture is ready for tightening, or the Lembert stitches, all in place, are ready for tying, according to the choice of the operator and the shape of the stump. The purse-string suture, if used, should be drawn tight as the forceps are removed. On the release of the stump by the removal of the forceps the canal may be explored and the stump invaginated. All of these manipulations may, if it be desired, take place simultaneously.

If the method described be used there is hardly any time at which there is a possibility of pus or any infectious matter from the lumen of the appendix or cecum escaping into the peritoneal cavity. The jaws of the forceps are so light as to cause very little contusion or devitalization of the tissues of the stump.

The use of the forceps minimizes hemorrhage and will in most cases shorten the time of operation. As to the use of the cautery for the separation of the appendix there can hardly be a valid argument against its use. McBurney and many others cauterize the stump after removal of the appendix. Why, therefore, not secure the additional safeguard against infection by making an igni-amputation of the appendix with the cautery? In most cases a separation may be accomplished with the cautery almost as quickly as with the knife, and certainly with greater safety. The forceps should have slender jaws beveled on the under side to avoid cutting the serosa of the cecum where they compress.

The forceps as represented in the illustration appear somewhat heavier than they should be. The grooves in the jaws should not run transversely, but parallel to the jaws of the forceps. The jaws with longitudinal grooves may be more readily withdrawn from the appendix.

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## THE SUCCESSFUL TREATMENT OF GONORRHEA AND ALL INFLAMMATORY DISEASES OF THE URETHRA

### BY PACKING IT WITH AN ANTISEPTIC OILED DRESSING.

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Neisser declares gonorrhea to be the most prevalent contagious disease, except measles, in all Europe, and that more than three-fourths of the urban population have had the disease. I believe reliable statistics would show the same condition to exist in America. So widespread is this disease that few practitioners are ever without one or more cases. The consequences and sequelæ of gonorrhea are so often hurtful and its treatment by the profession generally has been so uncertain and unsatisfactory that it really is to be considered a woeful disease.

The injection treatment, perhaps the most universally used, and, by the way, the most abused, can never be depended on to yield definite results. The irrigation treatment, now popular with a large number of physicians, is so often disappointing that it is scarcely more commendable than the injection treatment. Internal medication is not to be considered a treatment *per se*, and should only be used as an auxiliary to local treatment. Certainly nothing approaching a specific has ever heretofore been proposed to treat this most common affliction of mankind. Hence it is with peculiar pleasure that I announce to the profession a new method of treating this intractable malady by packing the urethra with an antiseptic oiled dressing.

When a patient presents himself for treatment he is examined carefully to ascertain the real condition to be dealt with: whether the case be acute or chronic, anterior or posterior gonorrhea, and what complications, if any, exist. I believe in giving only the most important directions and require them to be carried out. When too many directions are given the patient he is not careful to follow any of them. I advise bodily rest only when convenient for the patient. A regular nonstimulating diet is allowed. Coffee, tea and tobacco are to be used sparingly. It is better if they are discontinued entirely. Alcoholic drinks and sexual indulgence are absolutely prohibited while under treatment. Salines are directed to keep the bowels open. The treatment proper is given in the following manner: After the patient empties his bladder completely the urethra is irrigated with a hot solution of potassic permanganate, about 1 to 3000. For this purpose I use the Valentine irrigator; though, if nothing better is at hand, the urethra may be flushed out several times with the ordinary rubber-tipped hand syringe. The packer

**Fig. 1.—A. Groove for index and second finger. B. Slide. C. End slightly tapered and curved. D. Edge rounded and smooth.**

is then dipped in a bottle of the solution used on the dressing, or glycerin may be used instead; after which the penis is grasped with the fingers of one hand and the packer introduced slowly and carefully into the urethra with the other hand. It is passed back about four inches in anterior gonorrhea and back to the neck of the bladder in posterior gonorrhea and prostatic troubles. Force is never used in introducing the packer. The urethra is then lightly packed with one inch continuous gauze strips, or better, a loosely spun cotton cord, which I now use, saturated with one of the following solutions:

℞. Iodoform ..... gr. xcv
Balsam of Peru ..... ʒiv
Castor oil q. s. ad ..... ℥iv

Rub iodoform in caster oil, then add balsam of Peru. You will notice that the odor of iodoform is practically masked in this solution. Or:

℞. Ichthyol
Resorcin, āā ..... gr. xl
Balsam of Peru ..... ʒiv
Castor oil q. s. ad ..... ℥iv
M. Ft. sol.

The instrument is gradually withdrawn as the dressing is pushed through, and when it emerges from the meatus the cord dressing is clipped with scissors, leaving about one-eighth inch of the cord outside of the meatus, which can be taken between the fingers when the cord is to be removed. A small piece of cotton is placed over the head of the penis and treatment is complete. The patient is now instructed to go as long as he possibly can before urinating, when the cord is slowly removed. The average patient will go from five to eight hours before urinating without much discom-

fort. I have packed the urethra at 8 or 9 o'clock p. m. and the patient has retained the packing all night. Ordinarily I pack the urethra once a day until after the discharge ceases, then every other day for ten days or two weeks. In some cases it is necessary to pack twice a day, morning and evening, till the discharge ceases. When the patient reports once a day for treatment he is given a solution to inject himself two or three times a day: a 2 per cent. solution of protargol in acute cases and a 1 per cent. solution of zinc sulpho-carbolate in chronic cases. While this may not be necessary, it is my practice to do it, unless the patient can report twice a day for treatment. The accompanying illustration shows an instrument I have designed to pack the urethra. While the instrument is intended primarily for a urethral packer, it can be used to pack any cavity equally as well. It is made on the order of a urethral sound, with the distal end slightly curved and tapered. The edge of

Fig. 2. The method of packing, patient standing, physician sitting.

the distal end is rounded and smooth. This facilitates introduction into the urethra and prevents injury to the urethral mucosa, which is an important consideration in the treatment of the inflamed urethra.

I submit below a record of some of the cases treated:

CASE 1.—C. B. C., clerk, unmarried, health good. Acute gonorrhea of one week's standing. Treatment was begun by having patient empty bladder completely. Then the urethra was irrigated with a hot solution of potassic permanganate about 1 to 3000, after which it was packed four inches back with gauze strips saturated with the solution. The patient was then instructed to go as long as he could before urinating, then to remove the packing slowly by catching it between the fingers and making gentle traction. He was irrigated and packed once a day for a week, then every other day for ten days, when he was dismissed. The discharge ceased after the second packing.

CASE 2.—M. R., engineer, unmarried, health good. Had treated himself by injections for about two months, yet there was a free yellowish discharge. Urethra was very tender about two inches back from the meatus. He was packed every day for six days, then very other day for ten days, when he was dismissed. The discharge ceased after the third day.

CASE 3.—H. G. N., clerk, married, health good. Chronic gonorrhea for ten weeks. Had been treated by irrigation since attack first began. There was a scant thin discharge during the day, with the morning drop. There was also a very tender spot about an inch back from the meatus. I first passed a sound, then irrigated and packed urethra for four inches. He was packed every day for four days, then every other day for a week, when he was dismissed. The discharge ceased the third day.

CASE 4.—M. W., superintendent, married, health good. Said he had gonorrhea three years previous and supposed he was cured. He had been treated for stricture. He came to be treated for an enlarged and painful testicle, also a like affection of the right inguinal glands. On examination of penis a drop of creamy pus could be expressed from the meatus. Said he had noticed this every morning for three weeks previous. He was packed every day for four days, then packed every other day for ten days, when he was dismissed.

This method of treatment is at once simple and rational and can easily be carried out by any physician who can pass a sound. All cases of gonorrhea, whether acute or chronic, yield promptly to this treatment. The discharge ceases in two to five days, and in ten days or two weeks more the patient is dismissed cured. The antiseptic oiled dressing renders the field unfavorable for germ development and promotes healing of the inflamed mucous membrane. There will be no foul discharge to soil the patient's linen. In all cases I have treated no complications like prostatitis, epididymitis, orchitis or cystitis have occurred, nor have any strictures followed.

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## EXCISION OF THE GASSERIAN GANGLION.

### WITH REPORTS OF TEN CASES OPERATED UPON BY THE HARTLEY-KRAUSE METHOD.

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So many excellent articles on all phases of this subject have appeared during the past few years that it seems superfluous for us to consider it exhaustively at this time, especially as little has been added to our knowledge since their publication. We will, therefore, take up only the principal points in the anatomy and pathology of the Gasserian ganglion, the etiology and symptomatology of tic douloureux, the history of the development of the operation for excision of the ganglion, and the modern methods of performing the operation itself.

### ANATOMY.

The Gasserian ganglion lies in a depression at the apex of the petrous portion of the temporal bone. It is a small crescentic mass of nerve substance, which appears, after careful dissection, simply as an expansion on the sensory root of the fifth nerve, which enters it at its postero-superior border. Its two chief surfaces are the antero-external and postero-internal; the former intimately connected with the overlying dura mater, and the latter separated from the bone by a thin layer of dura with which it is loosely connected.

Cushing describes, in addition to the thick dural layer covering the ganglion, a thinner fibrous tissue, firmly adherent to its upper surface and binding it and the sensory root to the underlying tissues. If the separation is begun from the front, the dural layer is easily lifted from the ganglion, this thinner layer remaining intact.

The three main divisions are given off from its anterior border: The ophthalmic passes forward and becomes very closely attached to the dura forming the outer wall of the cavernous sinus; the superior maxillary passes through the foramen rotundum, and the inferior maxillary through the foramen ovale, uniting with the motor root after its exit. In the skull the motor root lies beneath and has no connection with the ganglion. The internal carotid artery passes upward in the carotid canal, lying first beneath the ganglion and then to its inner side.

The middle meningeal artery arises from the internal maxillary, passes upward through the foramen spinosum, and after entering the cranium divides into two main divisions, anterior and posterior. It gives numerous branches to the Gasserian ganglion and dura mater in the vicinity, and for this reason, as well as by reason of its close proximity to the ganglion and inferior maxillary division, it is of great importance in the performance of excision.

The relative positions of the foramina at the base differ greatly in different skulls, as do also the bony prominences and depressions which surround them. The most important of these bony projections is found in skulls having a wide basal diameter and is situated just to the outer side of the foramen ovale. In the inferior operations these elevations may cause considerable annoyance in reaching the ganglion, but are of less importance when operating from above. Dollinger, in a series of careful measurements, has determined certain facts in this connection to which reference will be made later.

### PATHOLOGY.

The pathologic changes which have been described as existing in excised ganglia are both varied and inconstant, ranging from slight irregularities in the size and shape of the nerve cells and fibers, staining reactions, etc., to the grosser lesions, such as tumors, endarteritis of the vessels supplying the ganglion and marked connective tissue hyperplasia. In some of the specimens there were almost no pathologic findings. The microscopic appearances in those patients previously subjected to peripheral operations may be due entirely to an ascending neuritis, occurring as a result of the operation, and are therefore in no way related to the original lesion. Schwab[1] of St. Louis, in a recent paper, reviewed the literature and reported the results of his examinations of two ganglia removed by Dr. William Bartlett. He describes unequal staining of the nerve cells, irregularity in their shape, atrophy of some cells and pigmentation of others. In one case the connective tissue was greatly increased and concentric bodies were present. He concludes that trigeminal neuralgia is not a definite disease, but "merely the symptoms of various processes affecting the fifth nerve anywhere in its course." He makes two divisions of the affection from a pathologic standpoint: 1. An ascending peripheral neuritis the more common. 2. An interstitial inflammation of the ganglion itself.

Barker[2] found, in two cases, degeneration of the nerve cells, variation in the size and shape of the nuclei, fragmentation of the nuclei and pigmentation of the cell bodies. There was no increase in the connective tissue, and no organic change in the blood vessels.

Spiller[2] describes tumefaction and imperfect staining of the medullary sheaths of the nerve fibers, with evidences of disintegration of the myelin, in the various branches of the ganglia examined by him. Some of the nerve branches were perfectly normal, and the diseased fibers were confined to certain well-defined bundles. The sensory root, too, showed some swelling of the axis cylinders, and numerous open spaces, enough to justify the conclusion that it was not entirely normal. There was no increase in the connective tissue, and no changes in the blood vessels in one case, while in the other some of the small blood vessels showed thickening.

Tumors involving the ganglion are rare, and Dr. Keen could find in the literature but two in addition to his own, one reported by Hagelstam—an endothelioma—and the other by Trénel—a sarcoma. His own case was one of endothelioma upon which he operated twice.

### ETIOLOGY.

Tic douloureux occurs about twice as frequently in women as in men, at all ages and usually at or after middle age. Under forty years of age it is found three time more frequently in women than in men, and affects the right side twice as often as the left (Dana). The second and third divisions are most frequently involved, either separately or together, and with or without the first division, which is rarely affected alone.

Victor Horsley gives the following as factors in the causation of the disease: 1. Cold. 2. Worry and overwork. 3. Alcoholic excess. 4. Ostitis of the alveolar borders of the jaws due to dental caries. 5. Rhinitis. 6. Traumatism.

Dana has seen it follow the grippe in one case, and severe hemorrhage in another.

William Rose, in considering the etiology, gives the following pathologic classifications:

I. *Intracranial.* *a.* Cerebral. 1, Sclerosis; 2, aneurisms; 3, tumors involving some part of the large extent of deep origin of the nerve. *b.* Radical. Any inflammatory affection of the sheath of the root. *c.* Ganglionic. Chronic interstitial inflammatory changes causing pressure on the nerve cells.

II. *Cranial.* All morbid processes at the base of the skull and in foramina. *a,* Tumors; *b,* callus following fractures; *c,* syphilitic periostitis; *d,* inconstancy of shape and size of foramina.

III. *Extracranial or Peripheral.* *a,* Dental caries; *b,* contraction of lumina of peripheral bony canals; *c,* exposure to cold or damp, producing perineuritis; *d,* retention of secretion in frontal sinuses; *e,* diseases of ear, nerves caught in cicatrices, impacted foreign bodies, etc.

IV. *Toxic, Reflex and Functional Causes,* as neurotic temperament, worry and anemia, etc.

Probably in the great majority of cases the disease process is ascending, beginning in the peripheral nerve filaments and later progressing to and involving the ganglion. In a few cases, however, probably including those not benefited by an extirpation of the ganglion, the lesion has been central, either in the area of distribution of the sensory root or in the sensory root itself.

Heredity plays no part in the etiology, though in some cases a neurotic family history is obtained.

### SYMPTOMATOLOGY.

The term "tic douloureux," according to Horsley,[4] should be applied "only to those cases of severe neuralgia in which the pain is paroxysmal in character, always limited to one side of the face, very often at first to one branch or division of the fifth nerve, and only later

1. Anns. of Surg., June, 1901.
2. Jour. A. M. A., May 5, 1900.
4. The Practitioner, September, 1900.

gradually invading the other branches; a neuralgia which is accompanied by other evidences of nerve stimulation, in the shape of the secretion of tears or saliva, and vasomotor dilatation of the vessels of the face, according to the branch of the nerve which happens to be implicated, and finally a neuralgia which only in its latest stage is accompanied by any anesthesia or numbness of the parts supplied by the affected nerve."

Dana[5] describes two types of trigeminal neuralgia:

1. The migrainous type, occurring in young females, in which the trouble is central and not in the Gasserian ganglion. This type may eventually pass into a true degenerative neuralgia.

2. A second, more common form, occurring after the age of forty, and twice as often in females as in males.

It is with this second type only that we as surgeons have to deal.

The essential symptoms of tic douloureux may, as mentioned above, be classified under two headings: 1, The pain itself, and 2, abnormal conditions of the motor, vasomotor and secretory apparatus.

1. *The pain* is unilateral, usually limited to the second and third divisions, though sometimes involving the first division, and occurs more often on the right than on the left side. It is characterized by periodic attacks of great intensity, alternating with intervals of freedom, the duration of which lessens as the disease progresses and the general nervous tone becomes lowered. At first coming on at intervals of several hours, or perhaps days, in the later stages the paroxysms follow each other every few minutes, so that the patient is in constant agony and frequently becomes deranged mentally as a consequence. The paroxysms are brought on by touching the affected side of the face, sudden noise, draught of air, or the mere attempt at speaking, laughing, coughing or chewing. The character of the pain is described as shooting or darting, and, as a rule, it is most intense at the points of exit of the nerves—the supraorbital, infraorbital or mental foramina. In the later stages it frequently extends to the auriculo-temporal branch and is referred to the entire temporal region. Only rarely does it extend to the opposite side, and when it does the disease is probably central, progressing in a peripheral direction along both sensory roots.

2. *The motor symptoms* may be spasmodic or paralytic, involving the muscles of the jaw, face or head. Accompanying the paroxysms of pain, twitching of some of the facial muscles of the same side is constantly present, most commonly those of the eyelids, alæ of the nose and angles of the mouth.

The secretory symptoms may be either an abnormal flow of mucus from the nose, saliva or tears, and usually occur like the motor symptoms during the paroxysms of pain.

The vasomotor manifestations, which may or may not be present, are: Reddening of the affected side of the face, unilateral perspiration, swelling of the veins, etc. In some long-standing cases a chronic inflammatory hyperplasia of the lips has been observed.

The general health in the majority of cases is not seriously affected, and for years, provided mastication is not interfered with, the patients may remain in good physical condition. Later, when the nervous system has become seriously deranged, and mastication is prevented by the severe pain which it causes, there is loss of flesh and emaciation. Some of these patients suffer from obstinate constipation, and complain that the pain is brought on or aggravated whenever they fail to keep the bowels freely open.

Periods of remission, lasting several weeks or months, are not uncommon, especially in the earlier stages of the disease, but they are always temporary, and the symptoms invariably recur. Herpes along the course of the affected nerve is often seen, usually early in the disease.

5. JOUR. A. M. A., May 5, 1900.

### PROGNOSIS.

In the great majority of instances of tic douloureux the prognosis is bad unless the radical operation of excision of the Gasserian ganglion is resorted to. The cases go on from bad to worse until finally life is rendered intolerable on account of the intense and almost continuous pain. Medicinal treatment, including castor oil and strychnin, afford at best only temporary relief, and the same may be said of the peripheral resections of the individual nerves and the various injection methods with osmic acid, etc. Many of the patients become confirmed morphin habitués as a consequence of using this drug for the relief of the paroxysms of pain. In the later stages, mental derangement is not uncommon, and, if of long-standing, may persist after the removal of the ganglion.

Dana, as a result of his experience, takes a more optimistic view and has observed complete disappearance of the symptoms without operation in a number of cases, some of them long-standing.

Removal of the ganglion in the great majority of the cases effects an immediate and permanent cure, though in a few, even after this had been done, there was a recurrence of the pain. In most of these, however, there was a reasonable doubt as to the complete removal of the ganglion, and possibly in some the disease was central rather than peripheral in origin.

### HISTORY OF THE OPERATIVE PROCEDURES.

The following résumé has been taken principally from the articles of William Rose[6] and Professor Krause.[7]

Neurotomy was first suggested by Albinus and Galen, and first carried out on the infraorbital branch of the fifth nerve by Schlichting in 1748. Neurectomy was first performed in 1793 by Abernethy.

In 1805 Langenbeck described the anatomy of the trigeminus nerve and the nature of the neuralgia, declaring it to be a local nerve lesion and therefore recommending division of the affected nerve as a radical cure.

Masius, in the same year, suggested that the treatment be directed to the cause of the disease. In 1822 Klein crushed and cauterized the central end of the divided nerve; Boyer the peripheral end; Middledorff, Bardeleben and others divided the nerve directly with the galvano-cautery, and Malgaigne split one or both ends and turned them back in a loop.

In 1832 Delpech called attention to the fact that when the neuralgia was due to disease of the nerve or sheath resection would not cure it, as reunion of the divided ends would take place. The operative treatment fell into disuse in the forties, and very few surgeons advocated it.

In 1852 and 1853 Roux and Sedillot again recommended operative procedure, and since then records of peripheral operations have been very numerous.

Von Bruns, in 1859, and Wagner, in 1869, reported many operations in detail, and proposed improvements on existing methods. The statistics of Weber, 100 cases with 18 cures, and Wagner in 1869, 135 cases with 18

6. Lancet, Jan. 9, 23, and Feb. 6, 1892.
7. Die Neuralgia des Trigeminus, 1896.

cures, after three years, show the relief of pain by these peripheral operations to be only temporary.

Stromeyer in 1864 opposed operation and advocated medical treatment, especially oleum ricini.

Removal of large sections of the nerve was first advocated by Braun, who suggested as a means of treating the infraorbital branch that it be divided both at the foramen rotundum and the infraorbital foramen, the intervening portion being entirely removed by traction. M. Beau applied the same method to the inferior dental branch, and Thiersch extended it to all branches of the fifth.

Vogt, in 1876, first applied nerve-stretching to the trigeminus; this method had been used previously in the case of other nerves by Nussbaum and Hauser. It, however, proved to be of even less value than the other peripheral operations, and was soon abandoned.

Krönlein's temporal method, of resecting the second and third divisions at the base, was developed from the procedures of Lücke, Braun and Lossen, described in 1884. It consists of six steps, and the deep field was exposed by a ∩-shaped skin incision, with its base on the upper edge of the zygoma, and resection of the zygoma itself.

In Kocher's method for resection of the superior maxillary division the antrum of Highmore is opened. The nerve is exposed through the floor of the orbit and torn or cut at its exit from the foramen rotundum.

Gussenbauer reported a similar operation to the German Society of Surgeons in 1892. The pterygo-maxillary operation of Professor Lücke, designed to reach the superior maxillary division, consists of resecting the zygoma and turning it upward, dividing and turning down the masseter muscle, dissecting in front of the temporal tendon to the sphenomaxillary fossa and dividing the nerve at the base.

Braun and Lossen modified this operation by detaching the temporal fascia from the bone and turning the zygoma downward with the masseter.

Pancoast dissected upward a triangular flap of skin and masseter muscle, with base at the zygoma, thus exposing the temporal tendon which was detached from the coronoid process and the latter removed. The insertion of the external pterygoid was then divided, and the third division reached at its exit from the foramen ovale.

Salzer recommended section of the third division at the base; a curved incision with convexity upward; division of the zygoma at either end; transverse incision through the temporal muscle just above the zygoma; retraction downward of the muscle and bone, detachment from above downward of the fibers of the temporal muscle, and external pterygoid from the temporal bone until the foramen ovale was reached.

Krönlein modified Pancoast's operation by dividing the zygoma in front and behind and retracting it downward, after which he divided the coronoid process and turned it upward.

The retro-buccal method of Krönlein is for the purpose of exposing the third division at the base, and by it the lingual, inferior dental, buccinator and auriculotemporal nerves can be followed to the base. It is accomplished by an incision extending from the angle of the mouth to the lobule of the ear, resecting the coronoid process and so reaching the base where the nerves are to be cut.

Kocher's operation for resection of the inframaxillary nerve is performed as follows: An incision is made, beginning behind the anterior portion of the malar bone, and extending backward to below the posterior part of the zygomatic arch, then upward and backward down to the bone. The zygoma is resected and turned downward and the temporal muscle retracted forward. The periosteum is now retracted from the base to the foramen ovale and the nerve resected.

Rose recommended the method of Horsley, by which the sigmoid notch is deepened by trephining and cutting with the bone forceps, the external pterygoid muscle retracted through the notch, and the foramen ovale found by tracing upward the third division.

### INTRACRANIAL OPERATIONS.

This brings us to a consideration of the intracranial operations which have been devised for the relief of tic douloureux, and these may be of three varieties: *a*. Intracranial division of one or more of the branches of the trigeminus, between the ganglion and the foramina of exit. *b*. Removal or destruction of the Gasserian ganglion. *c*. Division or resection of the sensory root between the ganglion and the brain. Of these the removal of the ganglion is the best and most satisfactory and the one most frequently performed.

J. Ewing Mears of Philadelphia, in 1884, first recommended the removal of the Gasserian ganglion in cases of severe trigeminal neuralgia, and William Rose of London, on April 2, 1890, was the first to perform the operation. In this case the superior maxilla was resected and the foramen ovale reached from the front. The pain had not recurred two years after the operation, but the eye on the operated side was lost.

Horsley reached the ganglion by an intracranial operation in which a large temporal flap was turned down and a corresponding area of the temporal bone removed with trephine and bone forceps. The dura mater was divided along the whole length of this opening, the temporo-sphenoidal lobe held up and the position of the sensory root ascertained. Incision of the dura over the ganglion was now made and the ganglion removed. Horsley performed this operation only once, the patient dying seven hours after the operation from shock, but in two other instances he made by its means an intracranial division of the nerve. Horsley resected the second and third divisions intracranially from below by a modified Pancoast-Salzer operation, making a temporal flap with the base at the zygoma, dividing the zygoma at its two ends and turning it with the flap downward, removing the upper part of the coronoid process with the lower portion of the temporal muscle, and finally exposing the base by retracting the external pterygoid muscle. The base was trephined between the foramen ovale and foramen rotundum, and the nerves resected intracranially.

Rose's second method, first performed by him in January, 1891, was as follows: Skin incision backward along the zygoma, down in front of the ear, and forward along the horizontal ramus of the jaw; the skin flap was dissected forward, the zygoma divided at its two ends and displaced downward and backward with the masseter, the coronoid process thus exposed was divided, and with the temporal muscle retracted upward. The internal maxillary artery was now ligated and the external pterygoid muscle detached from its origin in the great wing of the sphenoid and external pterygoid plate. The foramen ovale was thus exposed, and the greater wing of the sphenoid trephined just external and anterior to the foramen. Ganglion was now loosened and removed piecemeal or with the curette. The coronoid process was then sutured in place or removed, zygoma adjusted and skin flap sutured.

Dr. Edmund Andrews of Chicago first performed this operation in America, and with success.

Hartley[8] of New York, in 1892, described a method for resecting the second and third divisions within the cranium, which was subsequently and entirely independently described by Krause.[9]

Hartley's first patient was operated on Aug. 8, 1891, and Krause's Feb. 23, 1892. In neither of these operations was the ganglion removed, but the second and third divisions were divided in front of the ganglion.

The first removal of the Gasserian ganglion by this method was performed Jan. 31, 1893, when Krause operated a second time on his first patient. The operation known as the Hartley-Krause method will be described later. Doyen, on March 6, 1893, removed the ganglion.

Tichonowitch classifies the operations for removal of the Gasserian ganglion as follows.

1. Temporal. *a*, Hartley-Krause; *b*, Hartley-Krause, modified by Coelho. Zygoma resected.

2. Sphenoidal. 1. *a*, Rose; trephination of base only; *b*, Doyen and Poirier; trephination of base in infratemporal plane, and inferior portion of temporal fossa.

In these two the route is through the muscles, and in a very vascular territory. The coronoid process is resected in both, as is also the zygoma. 2. *a*, Jacob; provisional resection of zygomatic arch, with outer half of zygomatic bone and adjacent portion of frontal process; *b*, Quénu-Sebileau; provisional resection of zygomatic arch.

In the two latter the route to the ganglion is between the base of the skull and its periosteum, in the territory of the intratemporal plane, that is, external to muscles and vessels.

Of the various operations those of Hartley-Krause and the later method of Cushing, not included in Tichonowitch's classification, are the procedures usually followed by American surgeons.

The Hartley-Krause operation, which we have used exclusively, is performed in the following manner (Krause's original description):

Chloroform anesthesia. The incision is begun just anterior to the tragus, is "uterus-shaped," first extending upward, then forward, and then downward with base of flap on zygoma. The base on the zygoma is 3 to 3.5 cm. wide, and the height in the center 6.5 cm. The greatest width is 5 to 5.5 cm. This incision is through all the tissues down to the base, and is then carried through the bone by means of a circular saw. Sometimes the bone is removed, but it is usually preserved, attached to its periosteum, forming the Wagner flap. In the second step, the dura is separated from the floor of the fossa to the foramen spinosum, and the brain retracted upward only so far as is absolutely necessary. The middle meningeal artery is always ligated, usually with two ligatures, and cut between them. In the third step, the hemorrhage is stopped by packing gauze between the bone and the retractor holding the brain upward. After the hemorrhage is stopped and the retractor is in position, work with the elevator is begun. The third division is first found and exposed, and then the second. The dura is pushed back from these two nerves and from the ganglion, and the three structures are lifted successively from the base.

In separating the dura from the upper surface of the ganglion it may be opened, but this is usually of no importance. The third division is grasped with Péan forceps and lifted upward. The first division is not exposed at any time during the operation except at its junction with the ganglion, because of its position in the wall of the cavernous sinus and its proximity to the third, fourth and sixth nerves.

After isolation of the ganglion, it is grasped with forceps at its junction with the sensory root; the second and third divisions are cut off at their exits from the foramina and the sensory root is twisted out by means of the attached forceps. It is sometimes taken off at the pons. The first division usually tears off close to the ganglion. The ends of the nerves are pushed down into their foramina; the retractor is removed and the flap brought into position. So far the motor root has not been separated from the ganglion in the performance of the operation, but experiments have shown that it may be possible to do it.

The deviations from the typical Hartley-Krause operation which we have resorted to are: 1. The De Vilbiss forceps is used for cutting the bone; 2, the extension of the base of the bone flap to almost one-half inch below the level of the zygoma. This is accomplished with a narrow blunt chisel, cutting the bone in parallel lines about one inch apart. When this division is made the bone is fractured transversely with an elongated Kocher dissector; the osteoplastic flap is then freed, so that it falls over the edge of the zygoma and is held retracted by a suspender of gauze. In addition to this the rongeur is used to remove the bone down almost to the level of the floor of the middle fossa. This gives a very satisfactory field of operation. The dura is then gently separated with the finger and elevated from the fossa until the second and third divisions are exposed as they enter the foramina, beginning in front and passing backward. As soon as the third branch is passed the middle meningeal artery should be looked for. This can now be readily ligated or crushed with the needle-holder, acting as an angiotribe, and cut without ligature. If bleeding follow the foramen can be packed with gauze, or, better, with catgut. This was necessary on only one occasion. The bleeding from this vessel in the early cases in which it was neither ligated nor crushed, was not troublesome.

A long blunt dissector then gently elevates the upper layer of the dura from the surface of the ganglion until its entire body is exposed. At the end of this procedure the dura will be opened and the cerebrospinal fluid will escape into the field. Blunt hooks are then passed under the second and third divisions and the nerves drawn strongly from the foramina. The branches are then divided with the scissors, and both are grasped with a Koenig or blunt polypus forceps, at first gently elevated, and, with the assistance of the dissector, detached from the under layer of the dura. The forceps are then twisted and the sensory root evulsed from its attachment to the pons. The brain is held back with a thin convex tongue depressor. It is compressed but very little, when a large amount of the bone has been removed. The end of the elevator is covered with gauze, which assists materially in controlling the hemorrhage. The wall of the cavernous sinus may be torn, but the hemorrhage is readily controlled by the finger or gauze-covered elevator, as the blood in the sinus has scarcely any pressure.

No effort was made in any of our cases to separate the first branch from the sinus. After the evulsion the blood was removed and the field gently packed with iodoform gauze, the end of which was drawn out at the posterior angle of the wound. In one of the cases it

8. New York Medical Journal, March 19, 1892.
9. Deutsche Gesellschaft für Chirurgie, June 10, 1892, and Arch. f. Klin. Chir., Oct. 11, 1892.

was drawn out at the anterior angle, which accounted for death in that instance, as the patient on the fifth day pushed the dressings back in order to free his eye, and thus exposed the angle of the wound. He was found with the wound unprotected and the cerebrospinal fluid flowing out of the opening left by the drain. Forty-eight hours after the exposure he died of septic meningitis. The packing was usually removed on the third day.

Of the recent routes advised the most attractive appears to be that of Harvey Cushing.[10] The opening is on a lower level than in the Hartley-Krause operation, which removes the obstruction offered by the zygoma. A cursory description of the operation may be given as follows: A small ∩-shaped incision, base directed downward, is made between the eye and the ear, the upper portion of the incision being one cm. above the center of the zygoma, the lower points of it being two cm. below. The zygoma is divided at each extremity and turned down with the flap and the incision then carried through the temporal muscle down to the temporal bone. The attachment to the bone is next scraped away with the periosteum, and in this way the lower portion of the temporal fossa of the skull, as far down as the attachment of the external pterygoid muscle, below the infratemporal crest, is well exposed. A gouge or small trephine is then used for removing a portion of the bone. The opening should then be enlarged with a rongeur until it is about 3 cm. in diameter. The middle meningeal artery can now be seen, and the work should be carried on anterior to it.

The dura is next elevated, and this can be done almost bloodlessly, to the foramen ovale, and the elevation extended forward to the foramen rotundum. The commissure of the under layer of the dura is then divided and the dura gently raised from the ganglion well back on to the sensory root. Before dividing the branches the ganglion is elevated and freed from its attachment to the under layer of the dura. The ganglion is then separated from its attachment to the first branch, and this must be done gently so as to avoid the cavernous sinus. The three peripheral branches are now elevated with blunt hooks and divided close to the foramina. The ganglion is grasped with a forceps and evulsed. The bone, fascia and muscles are replaced and held in position by sutures. No drainage is used. While we have not performed this operation except on the cadaver, it appears to have the following advantages: 1. Smaller incision; 2. less extracranial hemorrhage and less bleeding from the venæ Santorini, and the probable avoidance of the middle meningeal artery; 3, ready access to the ganglion without cerebral compression, and 4, if drainage is necessary it will be at the most dependent portion of the cranial cavity.

*(To be continued.)*

10. Jour. A. M. A., April 28, 1900.

**The Right of Privacy.**—The *Philadelphia Press* has recently called attention to a decision of an English law court that is of great importance to physicians. According to this English decision (which would probably hold good in most American courts), a regular physician has no remedy if he prescribes a proprietary medicine, and the owner of the medicine publishes that fact in his advertisement. It is just as well for physicians to understand this matter. The market is flooded with proprietary drugs, and not a few of these are of distinct value. The custom of prescribing them is quite common, and is increasing.—*Phila. Med. Jour.*

# THE SURGERY OF RICKETS.*

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Out of 42,124 new cases applying for treatment in the ten years, 1890-1899, at the orthopedic clinic of the Hospital for the Ruptured and Crippled, 6,583, or over 15 per cent., suffered from rickets or the deformities most frequently caused by rickets, such as bow-legs, knock-knees and pigeon breast. While it would be erroneous to class all cases of bow-legs and knock-knees as rhachitic, in the class and grade of cases applying at the clinic the large majority are due to this cause. Making allowance for a considerable number of patients with varicose veins and other purely medical or surgical affections, it is safe to say that rhachitic patients form nearly one-fifth of the orthopedic cases at this clinic.

Of the total number of rhachitics about one-half came on account of bow-legs, over one-quarter for knock-knees and the remainder for anterior tibial curves, rhachitic spine, pigeon breast and other deformities, or for the rhachitic condition. A large majority of the cases were under 5 years of age. As already hinted many of the slighter and a few of the severe cases of bow-legs and knock-knees in young children are due to other causes. When arising in adolescence they seem usually to be due to static conditions, since the general symptoms of rickets are absent. Most cases of lateral curvature and of coxa vara are probably not rhachitic, though many of the early cases are. Very many of the milder cases of bow-legs and knock-knees, whether rhachitic or not, recover without special surgical treatment, and in these, indeed in all, a roborant régime, aiming to improve assimilation and nutrition, is indicated. Plenty of sunlight and fresh air, a nourishing diet, containing fresh milk, eggs, fresh meat or meat juice, gravy, digestible fats and fresh fruits are of the greatest importance. Cod-liver oil and iron are often valuable, and good results are reported from the use of phosphorus and of the lactophosphates.

The classes in New York among which rickets is most common are the Italians, the negroes and the Russian and Polish Jews, and it is these people who most notoriously sin against hygienic laws. It is common for them to feed their babies on condensed milk and artificial foods, with additions of tea, coffee, wine or beer, and cake and other solids from the table. Their babies are often kept on the breast up to the age of two years or more, even if the mother has again become pregnant. Nevertheless, rickets is not confined to the poor, the ignorant, nor to the city dweller. An improper diet is probably the most potent cause.

It should be remembered that the malnutrition of rickets profoundly affects all the tissues, including the muscles, nerves and glands, not merely the bones; the sweating, the weakness, the bronchial and intestinal catarrh are evidences of a widespread nutritional vice which must be corrected if surgery is to succeed. The blood must be enriched and the body generously nourished. A change of air, especially a trip to the seashore and salt-water bathing are often of considerable value.

The earlier stigmata, and even the earlier deformities, such as the epiphyseal swellings, beaded ribs, square forehead, large fontanelles and protuberant abdomen are often unnoticed or made light of by the parents,

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who may first be disturbed by marked deformities of the back or limbs or by the child's weakness or inability to stand or walk at eighteen months or two years of age. This slowness in walking is often a fortunate circumstance and one much to be encouraged, since at this early stage walking could only result in a rapid increase of deformity. In the stage of bony softening then it is often of primary importance to keep the child off his feet or to limit walking and standing, whether the predominant deformity be bow-legs, knock-knees or kyphosis. In the latter affection even sitting may be productive of harm, and the prone position for some hours a day may be indicated. The generous use of the perambulator serves the double purpose of bringing the child into the fresh air and keeping him off his feet. Particularly in these non-ambulant cases are massage, frictions with cold water or diluted alcohol and manipulations of the trunk and extremities of service, though they are worthless for the correction of serious deformities. In mild ambulant cases it is often well to build up the outer edge of the shoe in bow-legs and the inner edge in knock-knees, in addition to the friction manipulations and exercises. As the child becomes older and more active, passing a larger part of its time in the open air and better able to assimilate an ordinary mixed diet, the nutritional vice usually subsides, either with or without treatment, and the various deformities of the back and limbs, unless very severe, tend to improve; many of the milder cases are completely corrected. Bow-legs improve more than knock-knees, or anterior curves of the tibia, and rhachitic kyphosis improves oftener than rhachitic scoliosis and pigeon breast.

Just a word as to rhachitic spine, which it is exceedingly important and also exceedingly easy to differentiate from spondylitis. In rhachitic spine the kyphos is rounded, involving many vertebræ, and may be partly or wholly obliterated by lifting the legs and pelvis, the child being prone.

In Pott's disease, in the active stage, there is a sharp knuckle at some point of the line of the spinous processes with muscular rigidity. The characteristic pains are at the sides or in front, and it often hurts the child to be lifted. There are no characteristic pains in rhachitic spine. In spondylitis the children are usually older and are nearly always able to walk. They cry at night and have a characteristic attitude in walking, standing and stooping.

The treatment of rhachitic spine is usually the treatment of rickets with the addition of recumbency or procumbency and massage. Apparatus is rarely needed. As the rickets improve the back becomes stronger, and a perfect recovery may usually be expected. Infantile scoliosis due to rickets requires similar treatment, with some additions, but is much more intractable. In pigeon-breast obstructions to the air passages are to be removed and pulmonary gymnastics employed.

If at one and a half to three years of age a child presents a fairly severe bow-leg or knock-knee, braces exerting a constant correcting leverage on the distorted bones should be worn. In most cases of bow-legs the Knight brace, taking its fixed points at the inner side of the os calcis and the internal condyle, and drawing the tibia over by a lacing to the bar on the inner side of the leg, answers the requirements. If, however, the femur as well as the tibia is bowed, a stiff apparatus should extend to the groin, and the knee and lower thigh be included in the lacing.

For knock-knees in its milder form the stiff Thomas knock-knee splint, making pressure over the outer side of the heel, great trochanter and counterpressure against the inner side of the knee, gives excellent results.

When the bones are too hard or the deformity too great to be corrected by splints, which is often the case after three or four years of age, an operation is to be considered. The classical operations are osteotomy and osteoclasis. Osteoclasis may be manual or instrumental. Manual osteoclasis is applicable in very young cases, when deformity is severe enough to require interference; in those and in all young cases where the rickets is still active, the after-treatment and general anti-rhachitic measures should be strictly attended to. Rapid osteoclasis, as described by Dr. Wallace Blanchard of Chicago, is an excellent operation and leaves little to be desired. The older methods are less neat and precise than osteotomy, and the latter operation, as improved under the modern surgical technic, is preferred by most New York surgeons. While bones have been broken and cut from the time of the ancients, it was not until after the adoption of asepsis in surgery that the cutting operation became a standard one.

At present the osteotome, or double-faced chisel, has displaced the saw, and the operation may be done subcutaneously, the operator never seeing the bone. Under proper technic the operation may be compared to subcutaneous tenotomy in the simplicity of the method and the certainty and precision of the results. Osteotomies for knock-knee involving the knee joint are unsatisfactory and unnecessary and have been abandoned.

For a knock-knee the femur is chisled a finger's breadth above the internal condyle (McEwen), or above the external condyle (McCormack). The only appliances needed are an osteotome with a cutting edge three-eighths of an inch wide and a sandbag. The patient having been properly prepared and anesthetized, an assistant holds the knee firmly against the sandbag in the semiflexed position and with the outer or the inner side uppermost. The operator having selected the point of entrance, and bearing clearly in mind the anatomy of the parts, guards the osteotome with his thumb and forces it down to the bone, keeping the edge parallel with its long axis; having penetrated the periosteum, the osteotome is turned 90 degrees, so that its edge lies across the long axis of the bone, and is driven nearly through it by rapid strokes of the mallet, the position of the osteotome being slightly changed in the plane of the section to avoid wedging and to complete the cut. When the bone, including the outer shell, has been about three-quarters divided, the osteotome is withdrawn, and the fracture completed by hand with a tangible and audible shock.

The deformity is then slightly overcorrected, good apposition being assured by unsevered portions of the periosteum. Though no Esmarch has been applied the bleeding is usually trifling, often but a few drops. The limb is quickly cleaned up, a sterile gauze and cotton dressing applied, and over this a plaster-of-paris spica from the axilla to the toes. This dressing is usually not disturbed for six weeks, and may be followed by a Thomas knock-knee splint or a plaster splint from the ankle to the groin. Suppuration or other accidents are very rare, but unless great pains are taken the deformity may be incompletely corrected or may recur from imperfect application or too early relaxation of the post-operative treatment. In young children it is not safe to dispense with splints for six months or more.

In bow-legs the greatest bowing is oftenest at the junction of the middle and lower thirds of the tibia, and it is here that the section is usually made. The opera-

tion is strictly similar to the operation for knock-knees, but simpler, as the tibia is nearer the surface. The bone is attacked on its subcutaneous surface, the shape of the bone and its relation to surrounding parts being borne in mind. The fracture is completed by hand as before. It is necessary to remember that, in cases of bow-legs severe enough for operation, there is a considerable inward twist of the tibia, which causes marked inversion of the feet. When the knees point forward the feet usually turn in 15 to 30 degrees. In order to correct this deformity it is necessary to break or sharply bend the fibula after division of the tibia, to overcorrect the bowing, and also to rotate the lower fragment outward. This is not always easy, and is frequently neglected in practice, and I have in some instances seen poor results from the neglect of this precaution. For bow-legs the plaster splint should reach from the toes to the groin, and if firmly adjusted the patient may walk at the end of a week; in the hands of a non-expert it is better to keep the child recumbent for a month. Careful attention to splinting for some months after the operation is essential to a successful result.

In the past ten years 428 cases of bow-legs, knock-knees and anterior tibial curves in children were submitted to operation at the Hospital for the Ruptured and Crippled. In most of these the operations were double, and in several instances multiple. In 367 cases one or more subcutaneous osteotomies were performed, in 28 cases cuneiform osteotomies were done, and in 12 instances osteoclasis was used. Of the 428 cases, 375 were discharged cured, 31 improved and 1, which was not rhachitic, but a badly united fracture of the tibia, unimproved.

For several years the subcutaneous method has practically always been employed; the cuneiform operation having been abandoned in these cases, even in anterior curves. When the bone is divided by a simple section and allowed to gape apart after correction the space fills up with new bone, and a good result is more certainly and safely attained than when a wedge is removed. It will rarely be necessary to divide the bone at more than one point.

Undoubtedly complications have arisen in connection with this operation, but I have observed none in my own practice, and have been unable to find any record or to hear of any mishaps of any consequence in the experience of the operators at the Hospital for the Ruptured and Crippled in the last ten years.

Mr. Edmond Owen called attention at the meeting of the British Medical Association in 1899 to the subject of ununited fracture of the tibia and fibula in children, relating several cases where union had failed to occur after an ordinary fracture, and if it were not for a large experience to the contrary one might fear this accident after osteotomy. A search through the reports of the Hospital for the Ruptured and Crippled for the last ten years shows but two operations for ununited fracture of the leg bones, both of the tibia, of which one followed a cuneiform osteotomy for a bad anterior tibial curve, the other a manual osteoclasis for a badly united fracture. Both finally united. Two other cases of ununited fracture following cuneiform osteotomy of the tibia in a girl of 3 and a girl of 13 have been observed by the writer. I have been unable to discover in this service a single case of this accident following subcutaneous osteotomy for knock-knees or bow-legs.

This experience agrees, so far as I am informed, with that of the principal operators for these deformities in this country.

CONCLUSIONS.

We may therefore conclude that:

1. Subcutaneous osteotomy of the shaft is a safe and certain operation for the correction of knock-knees and bow-legs.

2. It is nearly always to be preferred to cuneiform osteotomy, osteotomy into the joint (for knock-knees) or operation by the open method.

3. The risk of non-union of bone or other accidents, with asepsis and an experienced operator, are slight, and not increased in rickety subjects.

4. The commonest errors are imperfect correction, especially failure to overcome inversion of the feet, and relapse from improper dressings, or from operating before the subsidence of the rhachitic process.

5. Plaster of paris makes an excellent splint, completely controlling the position of the fragments when properly applied. Plaster or other splints should be worn for some months.

6. Subcutaneous osteotomy may be likened to subcutaneous tenotomy:

*a.* In its simplicity, certainty and freedom from complications.

*b.* In the advisability of correction of the deformity at the time of operation, in the facility with which union occurs and gapes are filled up, in the importance of careful and intelligent postoperative treatment, and in the permissibility of locomotion before firm union has occurred, provided the parts are perfectly controlled by splints.

Each is indicated when the structures involved can not be permanently corrected by stretching in a reasonable time, and both mark a distinct advance in the treatment of certain deformities and are worthy of wider recognition.

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## TREPHINING FOR BRAIN TUMORS; REPORT OF TWO SUCCESSFUL CASES—ONE OF NINE YEARS.*

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Operable brain tumors are rare. Only 6 per cent. of all cases are suitable for operation. In a recent compilation by Haas[1] 122 were tabulated. Permanent successes after operation are rare, even in the experience of such masters in this special field as Horsley, McEwen, Bergman and Keen. Therefore, every case carried to a successful issue is worthy of record. While I have trephined eight times for a supposed neoplasm, I was but twice rewarded by success. In a third case, a syphilitic thickening of the dura equivalent to a tumor formation was found. As a success from a diagnostic standpoint it is equivalent to a successful trephining for tumor. In each of these cases the tumor was in the psycho-motor area, thus again emphasizing the fact that only when in this limited field can brain tumors be recognized with any degree of certainty. My first case was operated on June 28, 1893. After nine years the patient continues well except for a slight paresis of the left extremities and epileptic seizures at intervals of three or four months. The case was reported by Dr. H. H. Hoppe.[2] The following is a short history:

Case 1.—A. L., aged 32 years, admitted to the Cincinnati Hospital, June 1, 1893. Family history negative; patient

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denies ever having had syphilis, and claims that he had never been sick before. He states that the present trouble began three years ago, with cramps in the left foot and leg, which came on at intervals of a few months. About six months before his admission to the hospital they became more severe and more frequent. The convulsions extended from the foot to the leg, then involved the arm and face. He states that these convulsions invariably began in the foot, and rapidly extended over the entire side, including the face, and lasted for a few minutes. The convulsions are followed by unconsciousness. This lasts for several moments, and leaves a somnolent state for several hours. He states that he has violent headaches and frequent attacks of vertigo. He states that he has never vomited. His mental condition has deteriorated somewhat.

An examination of the fundus shows a somewhat injected papilla on the left side and rather indistinct margins. The left side of the body, both arm and leg, are decidedly weaker than the right. While in the house the patient had a number of very typical convulsions, which were observed. They began with a spasm of the left toes and foot, which extended rapidly to the upper extremity, thence to the face. Unconsciousness followed. There is a marked weakness of the left arm and leg with increased tendon reflexes. There is no disturbance of sensation. Diagnosis: Tumor in the right foot-center.

Operation, June 28, 1893. Morphia-chloroform narcosis. Horseshoe incision over right upper Rolandic area. A trephine opening, oval in shape and measuring about three inches in length by two in width was made. There was but little bulging of the dura mater. When the latter was opened the tumor presented itself in the right foot center, extending into the parietal lobe. It was the size of a hen's egg, and readily shelled out. It seemed to spring from the pia mater, and when removed left a clean cavity. The wound was packed lightly, and except for this healed by first intention. Immediately after recovering from the anesthesia there was found a total paralysis of the left arm, and the patient was not able to make even slight movements of the fingers. This, however, was rapidly recovered from.

The patient left the hospital six weeks after the operation, with the wound entirely closed. He has presented himself to Dr. Hoppe from time to time during the last nine years. From time to time he has light epileptic seizures and there remains a slight paresis of the left arm and leg with slight rigidity. In this case the operation saved the life of the patient, relieved his heart symptoms and diminished very markedly the number of epileptic seizures. Although it failed to completely cure him, there is no recurrence of the growth after nine years.

CASE 2.—E. O'B., aged 30, single. Father living, mother died of heart disease. Five years ago the patient suffered from pulmonary tuberculosis, which was manifested by hemorrhages, infiltration of the left apex, and the presence of tubercle bacilli in the sputum, evening rise of temperature and loss of weight. He was referred to Dr. J. T. Whittaker, who treated him with tuberculin. He recovered entirely from the pulmonary tuberculosis, and followed his vocation, that of a traveling salesman.

On Jan. 29, 1901, while eating, there was a sudden twitching of the lip on the right side followed by a twitching of the right thumb, index and middle fingers. The entire arm was drawn upwards and backwards and then he lost consciousness. A second attack occurred as he was closing his satchel. This time it began in the fingers, which seemed to clutch the satchel; the arm and shoulder were then drawn up and he again lost consciousness. I saw the patient shortly after this attack, and his description thereof was very clear up to the moment of the loss of consciousness. How long the unconsciousness lasted he is unable to tell. A third attack came on July 20, and a fourth one August 20. When seen about this time by Dr. Zenner, slight attacks of a different character developed. Sometimes they consisted of only a peculiar sensation of numbness in the thumb; again, there was a stinging sensation in the thumb, index and middle fingers. More rarely there were also slight clonic spasms in these fingers. Sept. 14, 1901, he had a paroxysm of clonic spasms of the right side of the mouth, beginning in the lips, and of the hand and arm, followed by a general convulsion. After consciousness returned, he suffered with very slight headache and a sense of prostration, which continued for several hours. Aside from this he never had headache and has not vomited. His mind has been as clear as ever. The patient's general condition is good, although he has lost about twelve pounds in weight since his first attack. Pulse a little more rapid than normal, tongue slightly coated. Bodily functions otherwise normal. Urinalysis negative. Heart and lungs normal. The pupils, optic-discs, the movements of the eye, vision, hearing, knee jerks and plantar reflexes are entirely normal. Patient speaks of a constant numb feeling in the tips of the fingers of the right hand, but a careful examination of tactile pain, muscular and stereognostic sense, reveals no impairment. He speaks of objects often dropping out of his right hand. Dynamometer indicates right hand 69, left 66. Percussion over the skull elicits no tenderness.

On the suggestion of Dr. Zenner, the patient was placed on the bromid of potassium, in 15-grain doses. This treatment was continued during three months, during which the patient had no convulsions. When seen by Dr. Zenner, November 11, the patient had no convulsions, though he had not infrequent peculiar sensations for a short time in the lips and fingers on the right side. There were still no symptoms of increased intracranial pressure. No headache, vomiting or optic neuritis. There were now slight symptoms of paresis. The right thumb and index fingers were weaker than the left. There was slight paresis of the right side of the mouth. In speaking there was more movement on the left side of the face, and when the patient forcibly compressed his lips they were more easily separated on the right side than on the left. After the discontinuance of the bromids the convulsions soon recurred. They began as in the previous attacks with a twitching of the lip or of the thumb and index fingers. They recurred at intervals of four or five days. Clonic spasms in the fingers and mouth appeared very frequently and a decided paresis in the former was easily recognized. The patient was unable to write without great difficulty and could not fasten a button, although the sense of touch was unimpaired.

Notwithstanding the entire absence of the general symptoms of brain tumor, the focal symptoms were so characteristic that the diagnosis of brain tumor was made, and from the previous history of the case, it was believed that a conglomerate tubercle would be found. The patient was examined about this time by Dr. H. Hoppe, who concurred in the advisability of an operation.

Operation, Good Samaritan Hospital, Feb, 11, 1902. Large horseshoe-shaped incision over left psycho-motor area with its central point over the middle of the Rolandic fissure. Trephine opening enlarged with rongeur forceps to limits of the incision in the scalp. The bleeding was very profuse from the diploë, but was easily arrested with bone wax, except for a very free hemorrhage from a large branch of the temporal diploic vein, which could only be checked by blocking it with a sterilized toothpick. The dura presented a normal appearance but was devoid of pulsation. The opening in the skull was three and one-half inches long, and three inches wide. Temporary sutures of silkworm gut were used to close the wound.

Second operation, February 14. This was begun without anesthesia. The wound was easily opened. The dura now presented a feeble pulsation. It was opened by a horseshoe incision. A flap with base below was formed and reflected toward the temple. While the cerebral convolutions did not bulge into the wound, inspection and touch failed to reveal anything abnormal. The patient was now brought into a sitting posture. This so allowed the brain mass to recede that palpation beyond the wound margins was made easy. A distinct induration was thus made out beneath the ascending frontal convolution. The operation thus far had been almost painless. Chloroform was now administered. With

rongeur forceps the cranial opening was enlarged. The convolution over the indurated space presented a normal appearance. Except for the abnormal size of the pial vessels. The ascending frontal convolution was incised. Perhaps half an inch below the surface a tumor was exposed and easily shelled out. Its position was such that its narrowest part presented toward the cortex. Its long axis was inclined backwards and inwards through the corona radiata and toward the ventricle. The hemorrhage while free was easily controlled by pressure. One cortical vein required tying. The opening in the dura was closed with fine silk and the external opening closed by interrupted sutures, a strand of silkworm gut being left for drainage. The center of the flap was buttonholed, and through the opening a gauze tampon was lightly placed against the dura. The patient recovered promptly from the operation. The first dressing was changed on the tenth day, when a complete primary union had taken place. During two or three days after the operation there was a slight paraphasia, and an inability except with great effort to move the right hand and forearm. Within a week the muscular control had been largely regained.

An examination of the tumor, made by Dr. Wolfstein, showed it to be a solitary tubercle, with the usual number of giant-cells and the degenerating area which take the stains badly.

*Subsequent History.*—Three and one-half months have elapsed since the operation. The patient has gained fifteen pounds in weight. He has had no convulsions of any kind since the operation. The numbness has entirely disappeared. There still remains a decided weakness of the flexors of the thumb, index and middle fingers. I would be tempted to use Faradization were it not for the experience of Heidenhain, whose patient went into a Jacksonian convulsion while the current was applied. He believes that perhaps this was the exciting cause of the general epilepsy which followed. Although there has been no indication of a convulsion in the second case, I have placed the patient for one month on the bromid of potassium, intending to keep it up for several months. The patient can neither write nor fasten a button.

The case just reported presents many interesting facts from the view points of diagnosis and treatment. The general symptoms of brain tumor were altogether absent. Nevertheless, when the skull was opened the absence of dural pulsation indicated an increased intracranial pressure which was relieved by the trephining alone. After three days the pulsation of the dura was normal. The tumor when removed displaced 12 grams of water, a mass pressure to which the brain accommodates itself. Much larger growths develop without the usual pressure symptoms, headache, choked discs and vomiting. Kroenlein[3] recently reported a case in which the operation failed to reveal a tumor. A year later an autopsy revealed a subcortical growth as large as an apple. The symptoms were altogether focal. Similar cases are recorded by Hitzig[5] and Bramwell.[8] In the former the operation failed to disclose a tumor. Death developed in three months. In the left centrum ovale a tumor was found 9 cm. long and nearly 7 c.c. wide. There were no compression symptoms at the time of the operation, notwithstanding the large size of the growth. The value of general symptoms in the diagnosis of cerebral tumors is shown by a statement of Bergmann's,[6] that to make the diagnosis of a cerebral tumor without the existence of headache as the most prominent of them is always venturesome (gewagt). Cases like the second recorded, and they are not rare, go to show that the diagnosis is indeed most easily made while the symptoms are altogether focal; while they are still unmasked and unaffected by increased intracranial pressure. With the development of the latter the value of the focal symptoms decreases, since both pressure and irritation symptoms seemingly focal are very common as a result of increase of intracranial tension (fern-druck). This explains the frequency of failure to find a tumor when seemingly unmistakable localizing symptoms are present. Against 104 cases in which operations were successful as to finding and removing a growth, there are 157 in which the operation was unsuccessful in one or other regard. The proportion of negative results is doubtless greater than even these figures indicate. Of eight trephining cases I was successful in three. Bergman in the Moscow Congress conceded four negative results to one positive. He has since, however, reported five cases in which the search was followed by the finding of a tumor or cyst.

An examination of the relevant literature discloses the fact that subcortical tumors particularly often escape attention. In the second case presented, nothing of the tumor was found when the dura was opened. By placing the patient in a sitting posture the brain receded to such an extent that palpation was permitted far beyond the limits of the cranial opening. I am sure that if this point is remembered by operators subcortical tumors can often be recognized that would escape detection without it. If, as in a case recently reported by Bramwell, the small tumor is situated an inch and a half beneath the cortex, even this postural aid may fail to locate the growth. That the tumor was subcortical was inferred by Dr. Zenner, from the fact that even the first convulsion was followed by complete unconsciousness. Furthermore, the entire absence of headache or of tenderness on percussion and of percutory changes spoke for the noninvolvement of the dura and cortex. The operation in the second case was performed in two sittings, as advised by Horsley and Keen. In the other cases in which I adopted the method the opening of the dura and the search for the neoplasm was done under cocain. There was no shock from either operation. If, in the second case reported, an enlargement of the opening in the skull had not been necessary, the second operation would have been completed as it was begun, with local anesthesia.

In the statistics of Haas already referred to, 122 operations, successful as regards the removal of a tumor, present a mortality of 61 per cent. A large share of the death rate is ascribed to shock and hemorrhage. With the more general adoption of the operation in two sittings this mortality will doubtless be decreased. In the two years, 1900-1901, Bergmann operated on four tumors with three deaths directly due to operation. One from sepsis, one from uncontrollable hemorrhage, the growth being an angioma. In two other cases of cyst the operation was successful. Bergmann operated on all cases in one sitting. Whether or not the hemicraniotomy, the opening of the skull with the large trap-door method, contributes to this large mortality of the operation is a subject still *sub judice*.

The statistics of Hale, White and Bernart, quoted by Seguin, show that tubercular growths are nearly twice as common in the brain as any other type. In 23 per cent. of all cases the tumor is tubercular in nature. Of the cases subjected to operation the percentage is much smaller. Of the 122 cases tabulated by Haas, only 12 of the tumors removed were tubercular. This discrepancy between the proportion of tubercular growths of brain tumors in general and the number found by operation is readily accounted for by two facts. First, these tumors are often multiple, as in a case recently in the service at the City Hospital, where the multiplicity of the tumors necessarily increased enormously the difficulties of localization. Second, tubercular tumors, because of the infectious nature of the underlying disease, have

been thought to be unfavorable for operation, because of their tendency to recur.

Two years ago Bergmann held the solitary tubercles are ordinarily not suited for operation. In a very interesting paper published by A. Preyer,[9] from the clinic of Roux of Lausanne, are collected all the cases of brain tubercle operated on up to that time. There were 16. One case has since been reported by Heidenhain.[7] The case above presented makes the eighteenth. Three patients died as a result of the operation. Six patients survived a number of months. Two patients died a number of years after the operation. A case of Czerny's lived four years and two months. A case of Horsley's died seven years and eight months after the operation of tuberculosis of the spine. So far as can be learned there are now living four of the cases operated on for solitary tubercle of the brain. Two cases of Roux, the one above reported and one of Kroenlein's, the latter living six years after the operation. Although these data are far from brilliant, they militate against the dictum of Bergmann above alluded to. When it seems certain that the tubercle is solitary and unaccompanied by changes in the meninges as made manifest by lumbar puncture, an operation is followed by the three-year limit of recovery in over 25 per cent. of cases, the justification of operation for brain tubercle seems thoroughly established.

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## SOME FACTS ABOUT VACCINATION.*

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Owing to a lack of exact knowledge from absolutely reliable sources on the subject of vaccination, there is a good deal of misapprehension in the public mind as to the efficacy of vaccination as a protection against smallpox, and the constant inquiry is made: "When shall we vaccinate?" "How long does it protect?" and "How often should we be vaccinated?" Many members of the medical profession, busy with other things to do and not compelled to face the epidemic horrors of a hundred years ago and not exact in their knowledge on the subject of vaccination, have a halting, uncertain, confused state of mind on the subject, which goes far to create doubt in the public. There are doctors, and good ones, too, who have had so little experience with vaccination that they do not know what constitutes a successful vaccination. I visited a neighboring town where a reputable physician of unquestioned ability told me he had a case of what he believed to be smallpox in a child he had vaccinated six weeks previous with a typical result. With the doctor I visited the child, found smallpox present, but absolutely no evidence of vaccination. There had been a scarification—too deep and too large—a black scab and a sore, but no vesicle, no febrile reaction and no scar. Had not some one who knows a vaccination seen this child the story would have been published to the world that a child had smallpox who had been vaccinated six weeks before the attack—a circumstance that never occurred and never will occur. Within a year there have been cases of smallpox reported by doctors as having occurred in persons after a recent vaccination. I am perfectly satisfied in my own mind that such cases are either chicken-pox, mistaken for smallpox, or more frequently the supposed post-vaccinal victims are not vaccinated at all, but have sore scarifications which are mistaken for and put down as vaccinations.

Many physicians not familiar with the glycerinated lymph had read that the new lymph produced results less severe than that produced by the "points" they had formerly used; secured spurious lymph from an active, enterprising firm and mistook the mild or severe sore, as the case might be, caused by the scarification and sometimes extraneous infection, for a true vaccination. This inert lymph even in the hands of competent doctors has caused doubt and confusion in the minds of many as to the efficacy of glycerin lymph, and has also caused to go on record cases of smallpox in persons supposed to have been recently vaccinated. Thousands are now relying on a false security produced by the use of this inert lymph. Dr. F. J. Runyon of Clarksville, Tenn., based his paper condemning glycerin lymph almost wholly on this firm's inert product. Dr. Runyon says: "Ninety to 95 per cent. of those vaccinated in 1900 with this lymph are still liable to smallpox." This is a fruitful source of error in the records against vaccination which should be eliminated. Inasmuch as I have evidence that this firm is producing potent lymph now, I need not mention names.

Another source of error is that it has been customary to record as vaccinated persons vaccinated after exposure to smallpox. This is now done in London, England, and the blunder has been pointed out by the British medical journals.

The report comes from London, England, that half the persons dying from smallpox had been vaccinated. I care not where such statements come from, they are not true. Such a statement means that the records are not made from facts; that they are perpetuating the old errors, taking the patient's word for fact and recording cases as vaccinated who were never vaccinated until after exposure. I have had reputable physicians tell me that they have had typical vaccinations with no resulting scar. Such a result is not to be relied on as protective. Revaccinate all such and another source of error will be eliminated. A successful vaccination may be known by the presence of vesiculation, umbilication, pustulation, mild and limited inflammatory area with febrile reaction. In about twenty days from the beginning of the vesicle the resulting scab comes off. This leaves a characteristic scar unlike that produced by any other agency. This refers to a typical result only. We must look with suspicion on any vaccination lacking these characteristics.

No person is insusceptible to vaccination. That is, vaccinia can be induced at least once in every person. I have known eight, ten, and in one instance—in the practice of the late Dr. Garrott of the Chicago Health Department—thirteen attempts to be made before a successful result was attained. Had Dr. Garrott stopped at the twelfth attempt the child would have been considered insusceptible. It is mischievous and untrue to teach that there is such a thing as insusceptibility to vaccinia.

In some persons one vaccination will protect for a lifetime, but in many cases the protective influence will be

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Hygiene and Sanitary Science, and approved for publication by the Executive Committee: Drs. Arthur R. Reynolds, George Cook and Heman Spalding.

partly lost in from five to thirty years. It will protect against death from smallpox long after it has ceased to protect from smallpox. It is not claimed now that one vaccination gives immunity from smallpox for life, though it often does. In most persons two vaccinations are all that will take, once in childhood and once in later life. By experience it has been found that there are comparatively few people in whom vaccination will take more than twice in the course of a lifetime.

One scar, I believe, is as good as several, unless the scars are made with an intervening period of time. When a vaccination is made the resulting reaction in the human economy is systemic, and one point of inoculation is as efficient as several. This was the belief and teaching of Jenner himself. When smallpox has been inoculated at one point the resulting disease gives the same immunity as does a multiple inoculation, and the same is true of other epidemic diseases. The figures produced to show that persons with multiple vaccination scars are better protected from smallpox than those with but one scar do not take into account that some of these scars, where more than one exists, were not made at the same time, but were from revaccinations at a later period.*

My own observation on vaccination in relation to smallpox, begun in 1893 and continued to the present time, leads me to believe that vaccination is more certainly protective against smallpox than the figures of most of the records we get will warrant. The fault of most of these records is that they are based on the statement of the patient that he has been vaccinated. An examination of the arm will disprove this statement in a majority of instances. The records are often made by the nurse who accepts the patient's word as fact. Anyone who has had experience with smallpox knows how unreliable the patient's statements are. Ask a hundred patients if they are vaccinated and nearly every one will say yes. Examine their arms and tell them you see no mark, and they will reply that they were vaccinated but that it did not take. Of course, this is no vaccination at all. To most persons a vaccination and an attempt at vaccination is the same thing. People say they have been vaccinated whether the operation is successful or not. Had we not examined the arms of the 591 cases of smallpox in the Chicago Isolation Hospital, but taken the word of the patient for the vaccinal status, more than half of them would have been recorded as vaccinated. And again, any scar at the site of an attempt at vaccination has been recorded as a vaccination.. We have done this at the Chicago Isolation Hospital so as to be fair and avoid the charge that we were manufacturing statistics, though we feel sure some of these are scars from infection and not from vaccine. Again, recording, as before mentioned, cases as vaccinated who were vaccinated after exposure, but too late to prevent the disease, have worked injury to the truth about vaccination. A close examination of all arms by experienced physicians will eliminate these sources of error which, in the past, have been recorded as truth, to the great detriment of accurate information on the subject of vaccination.

I do not hesitate to say that vaccination repeated till the susceptibility to vaccine is exhausted is an absolute protection against smallpox. This is the protection given the employes in the Chicago Health Department while they are handling and nursing the sick and burying the dead from smallpox, and in no instance has any of these thus employed contracted smallpox. This is the protection given the 3,200 policemen of Chicago, who, next to the employes in the health department, are the most exposed to smallpox of any class in the city. No case of smallpox has occurred among the policemen of Chicago in the ten years I have been in the health department. Vaccination on entering the school, and again seven years later, is the protection from smallpox given the 265,000 school children of Chicago, and in ten years but 7 cases of smallpox have occurred among the school children, and all of these children were in school with a false certificate of vaccination. In one instance last year a child in school with a false certificate attended school two weeks while he had a mild form of smallpox and but one child in the school took the disease, and this child also was in school with a false certificate. No vaccinated school child in the Chicago schools has had smallpox during the last ten years, though Chicago suffered a severe epidemic of smallpox in 1894 and 1895, and has had a mild, almost continuous epidemic of the disease for the past three years. During the last two years more than 600 medical students have been permitted to enter the Chicago Isolation Hospital for the purpose of studying smallpox at the bedside, where they were thoroughly exposed to the disease in all forms and stages. Not one of these students contracted the disease. Before permitted to enter the hospital each student was required to have a vaccination, and if the vaccination was more than a few months old, three revaccinations. I offer the experience of these students as proof that vaccination with revaccination gives absolute protection from smallpox. I never saw nor heard of the vaccinated members of a family having smallpox while the unvaccinated members of a family escaped the disease. Scores of times I have sent all the

* Since presenting this paper at the recent meeting of the American Medical Association, my attention has been called to the following passages in a "Report on the Smallpox Epidemic in Illinois, 1881-1883, and the Relations of Smallpox and Vaccination," by Drs. John H. Rauch and F. W. Reilly, and published in the Fifth Annual Report of the Illinois State Board of Health, pp. 211-520. The writers say (page 495): "As to the number of insertions which should be made there is some diversity of opinion. The English and continental practice, or wherever arm-to-arm vaccination is the rule, is to vaccinate in several places—four or five, or even more—and often on each arm. It is probable that the custom arose out of the desirability of securing as many vesicles, which could be tapped, as possible, and that the question, originally, had an economic rather than a protective importance. Jenner's early rule was to make only one insertion; but as he laid much stress on the necessity of preserving the vesicle intact throughout all its stages, it became necessary to multiply the number of vesicles in order to procure a supply for the arm-to-arm process. Subsequently, the oft-quoted table of Marson, supplemented by that of the London smallpox hospitals and one by John Simon, seemed to establish a connection between the number of vesicles and the protection conferred. On the whole, however, there is reason for believing that the quality of the vaccination is of much more importance than its quantity, as measured by the number of vaccinal scars. It is at least certain that the first vaccinations performed by Jenner and his immediate disciples, proved amply protective, although they consisted of single insertions 'by means of a very slight scratch, not exceeding the eighth part of an inch, or a very small oblique puncture.' Jenner, indeed, distinctly says that 'a single pustule is sufficient to secure the constitution from the smallpox; but as we are not always certain the puncture may take effect, it will be prudent to inoculate in both arms, or to make two punctures in the same arm about an inch and a half asunder, except in very early infancy, when there is a great susceptibility of local irritation.'" The writers continue: "There is no obvious physiological or pathological reason for the claimed increase of protective power through an increase in the number of vesicles. The figures compiled by Marson, MacCombie and Simon, which are relied on to prove such relation, are more philosophically explained by assuming, as is self-evident, that the chance of obtaining at least one perfect—and, therefore, fully protective—vesicle is increased by the multiplication of the number of vesicles. But this is to confess to carelessness or imperfection on the part of the vaccinator which needs to be corrected by using a blunderbuss instead of a rifle. In the thirty-odd years' experience of the writers, with exceptional facilities for observation, it has been found that post-vaccinal smallpox is fully as frequent, in proportion, among those vaccinated in countries where the rule of multiple insertions obtains, as among those presenting single well-marked cicatrices; and that neither the one nor the other is to be relied on to the neglect of revaccination."

unvaccinated members of a family to the hospital sick with smallpox while all other members of the same family who were vaccinated escaped the disease. This is not an uncommon occurrence. I never have seen a case of smallpox in a person who has had a typical vaccination within nine years, though I am aware that it sometimes occurs.

From March 9, 1899, to June 5, 1902, there were 591 cases of smallpox in the Chicago Isolation Hospital. Of these 535 never had been vaccinated; 8 had typical old marks made in childhood from 16 to 50 years previous to the attack; 48 had some kind of an old, doubtful or imperfect mark, said to have been the result of a vaccination performed many years before. Not one of the 591 persons had been vaccinated in accordance with the requirements now known to be necessary for protection against smallpox. All patients were carefully examined by three experienced physicians for evidence of vaccination, and the record here given can be relied on as correct. These figures show that over 90 per cent. of the cases came from the few unvaccinated who are either too ignorant, too careless, or too stubborn to avail themselves of the positive protection to be had by vaccination.

I wish to make a plea for a restudy, from original observation by medical men who meet smallpox, of the subject of vaccination in relation to its protective influence. Throw aside the doubtful records. Take the word of no one as to whether he was vaccinated or not. Examine the person for a scar and record the finding. Eliminate all sources of error. A restudy for the accumulation of new and more accurate knowledge will remove the last objection to vaccination. Vaccination is now more broadly accepted than any other one great idea that has obtained hold in the minds of men, not excepting the Christian religion. There are dissenters in religion; there are those who dissent to every proposition under the sun. There will, however, be left no cause of dissention to the virtue of vaccination when the existing evidence is examined and properly recorded.

At the close of last year Chicago was found to be menaced by smallpox which was prevalent in a vast territory surrounding the lower and upper lake regions. To vaccinate and keep vaccinated the large, floating, lodging-house population was one of the many problems before the health department. Following the policy of the department of educating the people in matters of sanitary importance, "A Vaccination Creed" and a supplement to this creed were prepared, giving correct information on the subject of vaccination for the education and benefit of the lodging-house patrons.

The creed, the outgrowth of experience, was formulated and printed on a card 10x14 inches, and reads as follows:

A VACCINATION CREED.

*We, the Undernamed, hereby publicly Profess our firm Belief—based on positive Knowledge, gained through Years of personal Experience and Study of Smallpox and Vaccination—*

FIRST. That true Vaccination—repeated until it no longer "takes"—ALWAYS prevents smallpox. NOTHING ELSE DOES.

SECOND. That true vaccination—that is, vaccination properly done on a CLEAN arm with PURE lymph and kept perfectly CLEAN and UNBROKEN afterwards—never did and NEVER WILL make a serious sore.

THIRD. That such a Vaccination leaves a characteristic scar, unlike that from any other cause, which is recognizable during life and is the ONLY conclusive evidence of a Successful Vaccination.

FOURTH. That no untoward results ever follow such Vaccination; on the other hand, thousands of lives are annually sacrificed through its neglect—a neglect begotten of LACK OF KNOWLEDGE.

ARTHUR R. REYNOLDS, M.D.,
Commissioner of Health,
CITY OF CHICAGO.

HEMAN SPALDING, M.D.,
Chief Medical Inspector,
DEPARTMENT OF HEALTH.

*December, 1901.*

This creed placard was posted up in all the lodging houses in Chicago. A note at the bottom of the poster informed the reader that further information as to vaccination and smallpox is contained in a supplement to the creed—copies obtainable on the premises. The clerk of the lodging house was well supplied with the supplement circular.

The supplement circular in the form of a four-page folder, 4x7 inches, giving facts and figures about vaccination and the reasons for the existence of the creed, was printed, including on one page the vaccination creed, and distributed by the thousands.

The creed poster and supplement were prepared for a specific purpose in Chicago, but they soon found a wider field of usefulness. Other cities and towns made use of them combating smallpox. Railroads applied for and received for their use the poster and supplement. One railroad posted the creed in each of its 1,200 stations. Managers of mining camps in the Rocky Mountains asked for and were supplied with this poster and supplement. In Chicago the circular was much sought after, eagerly read, believed and its teachings heeded by thousands who, without this knowledge, would have remained indifferent or opposed to vaccination.

## DISCUSSION.

DR. B. V. HEDGES, Plainfield, N. J.—I would like to report some experiences we have had in Plainfield which bear on the paper just read, particularly as to the value of vaccination after exposure. One case occurred in one of our tenement-house districts, where there were eight men and women and three children in the household. The patient had been sick for four days before any physician had been called. He was promptly removed to an isolated building where he died the next day of the hemorrhagic form of variola. The inmates of the house were all vaccinated, except one man who made his escape before the doctor could operate on him. The result was that we had no trouble at all with the people who had been vaccinated, but two weeks later the man who had escaped was discovered at Allentown with a malignant type of the disease. None of the people referred to had been vaccinated before. In all of them the vaccination seemed to take, and, as I have said, none of them had the disease. The Allentown case was a most beautiful control experiment.

DR. H. M. BRACKEN, Minneapolis—I wish to endorse the paper in its entirety, and have little to say in the way of criticism because the sentiments expressed all through are practically my own. The fact of calling an operation that has not taken a vaccination has lately proved the source of a great deal of trouble. In our own state I recollect an instance of a rather striking character. An epidemic occurred in a little village. A capable physician went out and reported to me that it seemed like smallpox, but that if it was smallpox vaccination did not protect against the disease. That took me to the place as quickly as possible. I asked the physician whether he had seen the arms of the patients or had taken their word for the fact of their having been vaccinated. He said he had taken their word. In the first house I asked the mother of several grown boys as to whether they had been vaccinated. She replied: "No; not that I know of." The doctor said the boys themselves had told him they had been vaccinated. In another household the mother had said the children were

vaccinated. Two had smallpox and two had not. I asked to see their arms, and she added: "But these two did not take." In a third case we found a young man who had smallpox. I asked to see his scar, and he showed me a mark on the lower part of the arm. I remarked that it was a funny place to have a vaccination scar, and on examination I found it to be nothing more than the scar of an old boil. These are specimens of the histories we obtained. I have made it a point to ask health officers about cases of reported smallpox after recent vaccinations, and the result is that I have not found any cases where the vaccination had really been successful, though there have been several cases where the disease has followed old vaccinations. In Winona, where the disease was epidemic, the inspector reported that there were only a few cases of smallpox in which there was any evidence of successful vaccination, and in the most recent of these cases vaccination had been performed six years previously. Some of the patients had been vaccinated with some of that very poor lymph that was on the market for a time, and only a very faint mark was left. It was frequently found that one individual who had been properly vaccinated escaped the disease while others in the same household who had not been similarly protected became infected. In my opinion there is nothing more positive than the protection afforded by recent vaccination. Even smallpox itself is not more protective against the recurrence of the disease.

Dr. D. E. Hoag, Brooklyn—I think the point as to many physicians not knowing how to vaccinate is a good one. Five out of ten practicing physicians may be said to be in this position. And what is worse, you have these men sent out by boards of health to perform vaccinations in a wholesale way. Their work is often done in a perfunctory manner, so many cases in an hour, and little attention is paid to asepsis or anything else. The act of vaccination is really a very delicate one and we have much yet to study and learn regarding it. My own experience, although limited to local work, has furnished me many contradictory results. I had a family of patients none of whom had ever been vaccinated. I started in with board of health vaccine. I tried it six times, but got no results. Then the family went to another physician, and it seemed to take all right, the result being that I lost my patients. As to the preparation of the arm, I would like to say a word. I have found some physicians who prepare the arm with bichlorid solutions, which I do not approve of. Others do nothing at all, and yet get good results. It seems to me important that we should at all events make the site of the operation aseptic, and that we should study the technic more than is done.

Dr. H. D. Holton, Brattleboro, Vt.—I should like to have some further information as to the kind of scar that may be relied on to show that a person has been properly vaccinated.

Dr. Spalding—It is very difficult to say what constitutes a typical scar. There should be some discoloration. There should be pitting. The mark should be rather deep; a superficial scar is to be regarded with suspicion.

Dr. Holton—Given a patient about fifty years of age who has not been vaccinated since childhood, would you not insist on a vaccination? Also: will you kindly state how you prepare the arm for vaccination?

Dr. Spalding—You can not be certain. Your best plan is to try it again. As to the preparation of the arm, you can use any ordinary disinfectant. Be sure, however, that the arm is washed with sterile water. I prefer a soda solution followed by alcohol. In regard to technic: about as neat a method as I know is to throw a drop of the vaccine on the arm before scarifying, and then rub it till the arm is red, but without bringing blood. I sometimes find sores as large as a quarter—I remember one case in which it was an inch square. These are altogether unnecessary, and are the things which bring vaccination into disrepute.

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**Bad Breath.**—To remove offensive odors, such as are due to whisky and tobacco, E. J. Kempf (*Indiana Med. Jour.*) asserts there is nothing more effectual than 1 part of hydrogen peroxid in 5 parts of rosewater.

## TWO CASES OF RETINAL DETACHMENT TREATED WITH SUBCONJUNCTIVAL INJECTIONS OF SALT SOLUTION.*

ROBERT L. RANDOLPH, M.D.
BALTIMORE.

I am aware that in speaking of the treatment of retinal detachment I am telling, so to speak, a story, the ending of which we can all pretty well surmise. But even negative results are helpful in getting at the truth of these matters, and I am not so sure but that they help us quite as far along the road as positive results. It is not necessary for me to review the history of this subject or to recall the fact that the treatment of retinal detachment might well be named failure. I shall go straight to the substance of this communication, then, without referring to the various methods of treating this affection. I have been struck with the results obtained by Dor, Winselmann and others when using subconjunctival injections of a salt solution. I put this treatment to a test in the following cases:

Case 1.—The first case was that of an Irishman who came to the Johns Hopkins Hospital about two years ago. I found that his right eye had useful vision and that a cataract had been removed from his left eye. This operation had been apparently successful, but he had not retained vision longer than three months when detachment of the retina occurred, and this condition he had endured for eighteen months when he came under my care. With the exception of a triangle embraced between say 105 and 165 degrees with its apex almost touching the optic nerve the retina appeared entirely detached. He had light perception and nothing more. I put him to bed on April 20, 1900, and on that day gave him his first hypodermic injection of a syringeful of normal salt solution. The injection was made as far as possible behind the corneal border. A compress bandage was then applied. The next day there was some redness near the point of the injection. He had experienced no pain. This treatment was kept up for a week, the injections being made every other day. During the second week a solution of the strength of six grains to the ounce was employed. The third week the solution was strengthened to ten grains, the fourth week to fifteen grains and the fifth week to twenty grains to the ounce. The injections, as usual, were given every other day. After the first week there was always a marked reaction which increased objectively and subjectively in proportion to the amount of salt in the solution. During the third week the pain was severe and lasted for an hour after the injection. During the week when the solutions were of the maximum strength the pain lasted for several hours and the conjunctival congestion was very intense. The patient was never allowed even to sit up. An ophthalmoscopic examination made at this time showed the retina in place but, with the exception of the triangular area which was originally attached, no part of the fundus gave back a clear red reflex. He could now count fingers at two feet. It was my intention to persist in the treatment, using each week a stronger solution, but he declined to remain inactive any longer and he left the hospital at the commencement of the sixth week.

Case 2.—The second case was a particularly favorable one for testing the value of the treatment. J. L. T., forty-one years old, came to me on June 2, 1901, with the report that the day before he had noticed a veil pass suddenly across his sight and since then he had only been able to see indistinctly things above the level of his own head. Examination showed a detachment of the retina which, roughly speaking, took in more than the upper half of the retina. This condition had occurred the day before, but four days previously he had been troubled with a dimness of vision in the eye. He had a myopia in this eye of about five diopters. It is rather interest-

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* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Ophthalmology, and approved for publication by the Executive Committee: Drs. Frank Allport, H. V. Würdemann and J. A. Lippincott.

ing in this connection to note the fact that he had consulted an optician ten days previously and had been given a pair of glasses to wear for reading. The right glass was concave 6.50 and the left was convex 1.50. When he first put these glasses on he had experienced intense pain in his myopic eye. He was told, however, to persist in wearing these glasses, which he did. The dimness which has been mentioned then appeared and culminated in the almost complete loss of vision, which was shown to be due to a detachment of the retina. He was put on his back the next day and exactly the same treatment was followed as in the first case. In this case the patient invariably suffered considerably after the injection and he was never able to stand a solution stronger than fifteen grains to the ounce. Once an injection of a twenty-grain solution was given and he suffered all that night. In two weeks I found that he could readily recognize every one in the room and that he could tell the time by his watch. The treatment was kept up for five weeks and all this time he was kept in bed. At the commencement of the sixth week I took him to my office and found that his vision was over 20/40ths with —5 Ds and that the retina was everywhere attached. For obvious reasons I did not attempt to make any lengthy subjective test. This condition remained for two weeks when the weather, becoming intensely hot, he was allowed to go to the country. This was the first week in August. Three weeks later he wrote me that his blindness had returned, brought on, he thought, by a long ride over rough roads on a fishing trip.

He came back to the city and I found the detachment pretty much as in the first instance. He was put to bed and every other day a syringeful of salt solution (fifteen grains to the ounce) was injected beneath the conjunctiva. In two weeks his vision was about where it was before he had gone away. This condition, however, did not persist, for from now on his sight grew steadily worse and by the first of October had gone back to the first stage of the affection. He refused to stay in bed or to have any more injections made, as he was unable to lose any more time from his work and had about made up his mind to get through life with one eye. At no time during his trouble had he been allowed to use his other eye for reading. I saw this patient last week, a little over a year since the trouble occurred, and there is practically little difference in the condition now from what it was when he first came under my observation.

It will be seen from this that the treatment in both cases was beneficial. The tendency of the method seems to be to do good. The marked local reaction which invariably occurred must be regarded as an advantage, acting probably as a revulsive and producing pretty much the same effect as the punctate cauterizations described by Dor and others. On several occasions the congestion and edema persisted for days, and there was often considerable tenderness in the region of the injection. The last case being a fresh detachment offered a particularly favorable opportunity for testing the value of this method, and while the immediate effect of the treatment was to restore vision, this effect was transient. The importance, then, of withholding from publication glowing accounts of cure in this class of cases is perfectly evident. At least a year should elapse before a just estimate can be made of the value of the treatment. It is almost certain that rest in bed played a conspicuous part in the improvement. Speculation as to the manner in which subconjunctival injections act in these cases seems to me superfluous.

The technic was as follows: The speculum, fixation forceps and hypodermic syringe were boiled five minutes before using. The salt solution was boiled in a test tube three minutes, so also the cocain. A compress bandage was applied immediately after the operation, and kept on all the time. When the reaction was intense a pad moistened with a solution of lead and opium was placed over the lid and the bandage applied as before.

## DISCUSSION.

DR. C. R. HOLMES, Cincinnati—About four or five years ago I had the pleasure of seeing Deutschmann's results in his operation for detachment of the retina. I saw the cases when the process of healing had taken place and the retina had reapplied itself, and I saw cases that came to his clinic that had been operated on a considerable time before. I was impressed with the operation and ordered a complete set of his instruments. Previously, I had sent a case there and the patient stayed four or five months, but did not do well, cataract developed and it was not a satisfactory case. I have tried it in four eyes, but have not had any very brilliant results. Last summer I asked Deutschmann if he could suggest anything and he said we should make the cuts more frequently, five, ten or fifteen times, clear through the globe. Injections of vitreous from the rabbit's eye were only resorted to in a few cases.

DR. LUCIEN HOWE, Buffalo, N. Y.—Last winter I made a few sections of the globe and my attention was attracted to the relation of the lymphatics of the eye to the sheath of the globe. If the injection goes between the globe and the capsule it may have some effect, but if through outside the capsule or in some distant portion of the orbit it might as well be injected into the ear.

DR. HERMAN KNAPP, New York—One word about the operative treatment in these cases. I have seen only temporary results, with one exception, and that is iridectomy in secondary complications of detachment or its cause. Detachment of the retina may remain partial and may certainly get better in the course of time. In a number of these cases there is an inflammatory basis, which produces mild irritation and when treated it may get better and the eye remain in the state of partial detachment.

I will mention, as proof, one case: a lady with detachment of the retina, first in one eye and then in the other. The first eye had an iritis, which, we all know, is progressive in the majority of cases. She had some sight left and I made an upward iridectomy in order to prevent secondary degeneration. It did very well and now, four years after the operation, she has only partial detachment and she has had no further iritis, or any inflammatory symptoms.

DR. S. D. RISLEY, Philadelphia—I have been very much pleased with the conservative tone of Dr. Randolph's paper. I think he states my experience very well when he says the tendency of salt injections is to do good. Dr. Knapp has, I think, struck the key-note in the matter, certainly for cases of detachment in myopic eyes. We should hardly expect any permanent results in these cases of stretched or enlarged eyeballs with their underlying pathologic conditions of the choroid. The salt solution always seems to do good and a number of times I have seen the retina reattach itself, wholly or partially, even in myopic eyes, but always detachment recurs. In one case it recurred, after an apparent cure lasting a number of weeks, during the journey to the hospital on a hot day. I do not remember ever to have seen a permanent cure of retinal separation in high myopia, and in others, only when produced by some traumatism occurring in otherwise healthy eyes.

DR. E. E. HOLT, Portland, Maine—Dr. Risley's experience causes me to rise and say that after Mittendorf read his paper before the American Ophthalmological Society a number of years ago, I had a case that year with very marked detachment, and she had 8 diopters of myopia. I began the injection of pilocarpin and then gave the solution of pilocarpus, a gram to the dose; gave her massage and kept her in bed and the retina reattached itself and her vision returned. That was in '84 and I have seen her nearly every year since. She is a lady who travels and she has never had any trouble since. She reads a great deal, too. I have had several cases of reattachment under such treatment.

DR. G. E. DE SCHWEINITZ, Philadelphia—This subject of detachment of the retina has always been of considerable interest to me and I am inclined to think that Dr. Risley understates his results. I have had good results with the subconjunctival injections by using a weaker solution than

has been advocated. I have never used the gelatin, but the physiologic salt solution. The rapidity of reattachment has been a remarkable thing to me. I have always followed the injections by somewhat prolonged massage of the eye. That has seemed to me to promote circulation and the absorption of subretinal products. I use 0.6 per cent. solution with the ordinary hypodermic syringe containing about thirty minims. I have also had the misfortune to see rapid reëstablishment of the original pathologic condition. It seems to me to be the best method recently employed. I have never seen Deutschmann's method used.

DR. RANDOLPH, in closing—I am glad that Dr. Howe emphasized his point. I stated in my paper that the injection was made as far back as possible and obliquely downwards. The anatomic conditions suggest such a course. I do not think we should withhold treatment no matter what the pathogenesis. The treatment seems to be harmless and there is a general tendency to do good. I would like to have Prof. Haab say something about the treatment on the Continent.

PROF. O. HAAB, Zurich, Switzerland—I can not say much about this treatment of Deutschmann's. I have tried it, but have had almost the same results as with the other methods. I visited him and saw some six or seven cases of his in very good condition, but my experience has not been so favorable. He says it is necessary to perform the incision sometimes ten, twelve or fifteen times, but it is very difficult to get a patient to come for fifteen operations in a clinic, and so I can not say exactly whether the method is a good one or not. It must be further studied.

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## THE EVOLUTION OF THE TREATMENT OF PELVIC INFLAMMATION.*

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Standing to-day as we do on the summit of perfected work in pelvic surgery, it is difficult for us to appreciate the helplessness of those who have preceded us in this field. Meiggs, the accomplished writer, the brilliant teacher and the leading practitioner of his day, describes in graphic terms the tubal tumor filled with water, pus or blood, and says, "the Fallopian tubes may be the seat of inflammation which will render fecundation impossible, but they are equally impossible of diagnosis during life." No one could present a more brilliant word picture of death from ectopic gestation than could he, but he was forced to end with the wail, "Alas, what can we do? Where is the surgeon who would be brave enough to open the abdomen on an uncertain diagnosis?" Much as he realized that surgery would afford the only hope of saving the life of the afflicted, he could not consistently urge its practice when he was calling on the attorney general to administer condign punishment on Atlee for his temerity in invading the peritoneal cavity for the removal of ovarian cysts.

The occurrence of pelvic inflammation in its various forms, involving tubes, ovaries, pelvic peritoneum and pelvic cellular tissue, could not escape the acute investigation of accurate observers; but its effects were most frequently observed after death. The course of invasion and its cause of development were not understood.

The influence and significance of micro-organisms had not yet encroached on the horizon of human intelligence. Failure to recognize their significance as a cause of disease kept them in terror from the invasion of the peritoneum for surgical purposes. The surgeon rash enough to enter found his reputation damaged by the frightful mortality which followed his action. The utilization of the principles enunciated by Pasteur in the investigations and practice of Lister, dispersed the thick cloud which had enveloped the progress of surgery and gave its advocates the ability and courage to investigate new and hitherto forbidden fields. The occurrence of pelvic suppuration had been recognized and its ravages appreciated, but in combating it, Thomas was an advanced leader, when in 1868 he advised that "operation should be deferred until all the efferent lymph has been softened, until all the abscesses have been coalesced and until the accumulated pus has broken down the tissue between itself and the channel of evacuation." The abscess may open through the vagina, the rectum or the abdominal wall.

Doubtless most of you know men who apparently have not passed 1868 in their methods of practice. Into this state of chaos broke Tait like a brilliant meteor in 1872, when he advocated and practiced the removal of the uterine appendages for inflammatory conditions. His axiom, "when in doubt make an exploratory incision," proved the searchlight in pelvic surgery. There was no longer excuse for want of knowledge of the course and results of pelvic inflammation, for his enthusiastic disciples were frequently in doubt and considered his teaching as the only true gospel.

As a consequence, no portion of the abdomen or pelvis was free from investigation, and every phase in the course of inflammatory conditions was subjected to accurate observation. The secretions and fluid collections were carefully studied and the association of internal conditions with external infections did not fail of discovery. The macroscopic study of the invasion of internal structures by micro-organisms promptly revealed the fact that these parasites generally reached the internal organ through the continuous mucous membrane and dispelled the previously held view that the cellular tissue was the structure most frequently involved. Tait was so profoundly impressed with the idea that the invasion was through the continuous mucous membrane that he was induced to advocate the removal of both ovaries and tubes when the appendages of one side were diseased, even though those of the other were as yet free, because he found that very frequently the remaining tube and ovary became affected when permitted to remain and necessitated resort to a second operation. This principle carried further led Pean, Baldy and others to advocate the removal of the fundus of the uterus, whenever conditions were such as to demand the extirpation of both ovaries. The doctrine that the uterus should accompany the appendages in their flight led to the division of the leaders into two schools, one of which would attack all cases through the vagina, while the other faction was equally vehement in the advocacy of the abdominal as the only true route for the removal of these structures. As is usually true, the happy medium lies between the two.

The application of the principles of Tait by his enthusiastic followers led to such a wholesale castration of women that there was aroused a wholesome fear that if permitted to increase in arithmetical progression there would be a marked reduction in the progress of the race. This reaction affected not only the profession, but the patients, who were deprived of the function of procreation, which possibly they had decried when they were its possessors, and now overvalued that which was lost.

Our study now became how to save rather than to sacrifice, and we retraced our lines of study and sought how to arrest the inflammatory process before it had involved the deeper structures. Such investigation

* Read at the Fifty-third Annual Meeting of the American Medical Association, in the Section on Obstetrics and Diseases of Women, and approved for publication by the Executive Committee: Drs. A. H. Cordier, W. E. B. Davis and Henry P. Newman.

deepened the impression that the changes were bactericidal in their origin, and could be divided into two great classes; the specific or gonorrheal, and the septic. That in both classes the infection was conveyed to the patient and did not originate within her organism. The application of surgical or aseptic principles to the practice of obstetrics has greatly lessened the frequency of septic processes. The recognition that gonorrhea in its influence on the female economy is more deleterious than is syphilis, has caused the profession to be anxious to arrest it in its early stages and thus prevent its more serious ravages. The acceptance of the bactericidal origin of pelvic inflammation makes us chary of intrauterine routine treatment. The sound, tent and uterine dilator are infrequently employed, and then only with aseptic precautions. In uterine inflammation drainage is promoted and this by the use of the dilator and curette. Where the inflammation is of such a character as to threaten the deeper structures, we no longer sacrifice both appendages when those of one side only are severely involved, but precede the abdominal or vaginal incision, as may be chosen, with a dilatation and curettement of the uterus.

While our investigations of the abdomen of the living woman teach us that the most frequent avenue for invasion is by the continuous mucous membrane of the uterus and tubes, it should not be overlooked that the blood vessels and lymphatics also afford ready entrance to the deeper structures. The recognition of this truth is of the greatest value from the standpoint of treatment. Inflammation involving the tubes, ovaries or peritoneum may be treated by either the vaginal or the abdominal route, according to the character of the involvement and the predilection of the operator, but in the majority of cases of cellular inflammation the election will be most frequently through the vagina. With the development of such inflammation we do not follow the already enunciated dictum of Thomas, but endeavor to afford free vent for the escape of exudation, and thus avoid cicatricial contraction. In involvement of the peritoneum we readily resort to the use of the curette, and at the same time break up pelvic adhesions and afford drainage. Each diseased patient is carefully investigated and where further invasion is threatened we endeavor to arrest its progress by the dual procedure of curetting and pelvic drainage, most frequently through the vagina.

The motto we now inscribe on our banners is, sacrifice nothing which we can save, keeping before us the purpose to restore our patient to health. Health in its true sense means not only freedom from discomfort, but also regained function.

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## DRAINAGE VERSUS RADICAL OPERATION FOR SUPPURATION IN THE FEMALE PELVIS.*

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It is my purpose in this communication to contrast the field of application of drainage with that of radical operation in the treatment of suppuration in the female pelvis. Recently I reported[1] my entire experience with the various operations which have been practiced for the treatment of suppuration in the female pelvis. This paper covered so wide a field that it was impossible to discuss in detail all the advantages and disadvantages of the drainage operation. In this communication I propose to discuss more fully not only the merits of the drainage operation, but also its limitations.

The chief field for the drainage operation is in cases of large pelvic abscesses in patients acutely ill and in those prostrated from long-continued suppuration. The drainage operation in this class of cases gives a mortality of 2 per cent. as contrasted with one of 25 per cent. or more by abdominal section. In this field there is no question concerning the positive merits of the drainage operation. It is done quickly, does not cause shock to the already weakened patient, and permits her to recover from the critical condition in which she is placed by the large abscess. In most cases of this kind it is best simply to evacuate the large abscess, wash it out and do nothing further. When the strength of the patient permits, in addition to this, it is best to palpate for additional abscess sacs in one or both tubes, and to evacuate these; but in many cases of large abscesses it is better to postpone the opening of small pockets to a subsequent date. Where the abscess is single, as in puerperal phlegmon, ovarian abscess and intraperitoneal abscess without pyosalpinx, the simple incision results in a perfect cure. Where several smaller pockets exist in addition to the large abscess, it is necessary to open these either at the initial operation or subsequently in order to effect a cure.

The next class of cases in which the drainage operation is of signal service is that in which suppuration occurs during an acute attack of peritonitis, and in which the peritonitis tends to become progressive, with the usual accompaniments of distension of the intestines, tendency to intestinal paresis and prostration of the patient from septic absorption. In these cases the pus may be in the tubes, or in the ovaries, or within the peritoneum. A radical abdominal operation under these conditions has a high mortality as contrasted with the scarcely appreciable mortality for a drainage operation. An analysis of my own cases shows a very large percentage of permanent cures in cases of puerperal origin. I have operated on only one case of recent suppuration from gonorrhea.

The small group of cases of suppurating hematocele from extrauterine pregnancy is also best treated by the drainage operation. I have operated on four such cases. All four recovered from the operation, but in two it was necessary subsequently to do a radical operation, in the one case because of the development of a hydrosalpinx, and in the other because of the continued annoyance of a tubal mole.

In the usual typical case of pyosalpinx or abscess of the ovary, uncomplicated by intraperitoneal abscess, and in which the amount of pelvic exudate is moderate and the size of the tubal or ovarian abscess small, I have never practiced the drainage operation, but have treated all such cases (which make up the great majority of cases of pelvic suppuration in women) by the radical abdominal operation. On theoretical grounds the drainage operation does not seem indicated in this group of cases. The pus pockets are apt to be multiple and small, the risk of opening the peritoneum is great because of the lack of extensive exudate walling off the peritoneal cavity, and therefore the results of the drainage operation would probably be unsatisfactory because of the incompleteness of the drainage and the risk of setting up a general peritonitis. Moreover, the results of the radical abdominal operation in this group of cases is

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1. The Treatment of Suppuration in the Uterine Appendages, American Medicine, vol. iii, No. 13, March 29, 1902.

so satisfactory that it will be difficult to improve on it by any other procedure.

Within the limitations laid down incision has proved to be a most conservative operation, not only in the saving of life, but in the conservation of the sexual organs. In only three cases out of fifty-two was it necessary subsequently to remove more than one uterine appendage. The operation has saved many young women from the annoyance of a premature menopause, and has enabled some of them to bear children. Six pregnancies are known to have occurred, resulting in five children—one pair of twins, one miscarriage and one pregnancy now developing.

With the operation of incision and drainage in cases of acute inflammation of the uterine appendages without pus, as practiced by Henrotin, Pryor, Polk and others, I have had no experience, with the exception of a few cases in which an extensive puerperal pelvic cellulitis was incised with the expectation of finding pus. In all of these cases the incision promoted the early resolution of the exudate. It is my intention to practice this operation in puerperal cases in the future, as I believe it will promote an early recovery in this group of cases and prevent the destruction of a certain precentage of the tubes and ovaries involved.

Having emphasized the advantages of incision and drainage, it is well to refer to some of the disadvantages inherent in this method of treatment. These disadvantages grow out of the imperfections in the diagnosis of morbid conditions in the pelvis. At times an ovarian cyst with peritonitis will be diagnosed as a pelvic abscess. Incision and drainage not only will not effect a cure, but may cause a disagreeable complication when the cyst is removed at a subsequent operation.

When incision is practiced in cases of small pus tubes it is quite easy to overlook one or more of the pus pockets, and quite easy to open the general peritoneal cavity. Therefore, in this class of cases also the operation is contraindicated.

In a certain percentage of cases, at times because of the condition of the patient, at times because of the inaccessibility of some of the pus pockets, collections of pus are overlooked in the primary operation of incision and drainage. In these cases it may be necessary to repeat the operation once or twice in order to effect a cure or to obtain healing of the sinus. This has been my experience in a small percentage of cases. It is in this class of cases that the skill and experience of the operator is of most importance. The surgeon of experience, who will restrict the operation to the classes of cases in which it is indicated, and whose trained touch can differentiate between pus sacs and adherent intestines, will not have a large percentage of failures to evacuate pus sacs, and will have only a small percentage of accidents, such as hemorrhage, perforation of the intestine, wounding the ureter, etc. On the other hand, the inexperienced surgeon, unless he restricts his application of the operation strictly to cases of large abscesses, is likely, through inexperience, to overlook the smaller pus sacs, or to wound adjacent viscera, in a considerable percentage of cases.

The technic of vaginal incision and drainage for pelvic suppuration is extremely simple in some cases and extremely difficult in others. In cases of single large abscesses and cases of puerperal phlegmon pointing toward the vagina, the operation is very simple. The patient is anesthetized, the vagina cleaned, the cervix exposed and an incision made with a knife across the vault of the vagina behind the cervix, the incision extending through the vaginal wall. This incision may be continued, the tissue being divided layer by layer until the abscess is reached; or, what is usually preferable, a pair of scissors, neither sharp nor blunt, is passed through the vaginal incision and pressed against the projecting abscess and pushed through into the abscess sac. The handles of the scissors are then opened, tearing the perivaginal tissues and the peritoneum, and giving vent to the pus. In the case of broad ligament phlegmon the incision is made over the most prominent portion of the abscess. In selecting the point for the incision the ureters and the uterine vessels must be avoided. In case the abscess is connected with one or the other uterine appendage and does not fill up and cause Douglass' pouch to bulge toward the vagina, the incision through the vaginal wall should be made to one or the other side of the median line, and then the scissors be pushed on into the abscess sac. When the abscess sac is distinctly lateral and relatively high, it may be necessary to separate the folds of the broad ligament from below with the fingers until the abscess is reached, and then puncture it with the scissors. This I have found necessary to do in numerous cases, especially in cases of ovarian abscess of puerperal origin.

So far the operation is simple and easy to perform. The cases in which the experience and skill of the surgeon come into play are those in which the abscess is not so large and those in which the main abscess within the peritoneum is complicated by pyosalpinx or ovarian abscess. In such cases the trained touch of the surgeon is necessary in order to distinguish the pus tube or abscess of the ovary from infiltrated or adherent bowel. In many cases this is difficult even for the expert to do, and at times discretion is the better part of valor, and the surgeon having evacuated one or more abscess sacs may well hestitate to puncture one in which the diagnosis is uncertain, lest by accident he open the bowel and cause a fecal fistula. Large experience in dealing with the results of pelvic inflammation by abdominal section will prove most helpful in the exact diagnosis and proper treatment of pus collections when treated by incision and drainage from below.

In a small percentage of cases, usually of puerperal origin, it will be necessary to supplement the vaginal incision by an incision through the groin, and in a few cases in which the abscess points in the groin the only incision required can be made above Poupart's ligament.

The points to be emphasized are that in large abscesses in patients who are extremely prostrated and ill the least done the better; the large abscesses should be freely opened and nothing more done. In many cases it is best to avoid even washing out the sac and to leave this for a subsequent occasion, as the strength of the patient will not admit of the prolongation of the operation. In all cases the main object to accomplish is to make the opening in the dependent portion of the abscess and to make the opening a free one. The opening should be made wide and free and not a mere puncture. If this is accomplished, most cases will undergo spontaneous cure without gauze packing and without subsequent irrigation. Packing and subsequent irrigation are only to be employed when this is necessary to effect the thorough evacuation of the abscess and the closure of the sinus.

## DISCUSSION.

Dr. Seth C. Gordon, Portland, Maine—I am very glad that this subject has been presented. I brought up the same question two weeks ago, in my address before the American Gynecological Society. I have done this for more than twenty years.

It is the simple application of ordinary surgical principles. Operate and remove pus every time you can. There is nothing more settled than that. An abscess should always be opened and evacuated as soon as possible. I agree with Dr. Noble that ordinarily you had better let these cases alone, and not do too much at the time you open, unless it is an old abscess. It is not difficult ordinarily to make a diagnosis, because, first of all, you generally have a well-marked history of an inflammatory process, such as temperature, pulse, pain, etc. Second, if you are familiar with the touch you generally get a little indentation behind the uterus, and that is the point for making your incision. I use the knife only, and then dilate with a uterine dilator. Formerly I used an aspirator, and then dilated with a dilator or scissors. It seems to me that this has saved thousands of women, not only from long suffering but subsequent abdominal section.

DR. W. H. HUMISTON, Cleveland, Ohio—Time and experience will bear out Dr. Noble's statements. I had a case a year ago of streptococcus infection following labor, in which the temperature ran up to 105 F., the woman had daily chills and a very weak pulse. With a few drams of chloroform and fifteen minutes' time, I had the abscess evacuated and she went on to complete recovery. She became pregnant again in another year. This shows the effects of an early trivial operation. If the woman had been allowed to become profoundly septic, an abdominal operation would have been required and possibly the result would have been fatal. In acute infectious conditions of the pelvic organs, radical abdominal operation is attended with a high mortality, and where we have the conditions as mentioned by Dr. Gordon, it is best to open at the most convenient place. The operation is so slight in its effect, and the results so extremely gratifying, that it should always be done. If the radical operation is necessary later on, the woman will be in condition to stand it.

DR. E. W. CUSHING, Boston—I agree with Dr. Noble and Dr. Gordon. That is the way I began to treat these cases, but under the progressive impulse of the Philadelphia school some of us were induced to do everything through the abdomen. I know I have lost cases by trying to do such an operation when it could have been done with safety through the vagina and just as easily. It is not unusual for these collections to be very large, and be mistaken by the attendant and even the surgeon for an ovarian tumor. The acute symptoms may have subsided; the mass is as large as an infant's head, fixed so that operation by abdomen for ovarian tumor is sometimes done. In other cases which are acute, the pus is liable to be septic. It is safe to open the abdomen and let out the pus from an old pyosalpinx, but it is a different thing to let virulent streptococcus pus soil the abdominal cavity where there is every probability of acute infection, but no one can tell beforehand the nature of the pus. It is my general rule to let the pus out from below, if I can possibly get at it. It is easy, simple and harmless, and it can be done with a little cocain in very bad cases where an abdominal operation would be fatal.

DR. T. J. WATKINS, Chicago—The difficulty usually lies in determining what class of cases are adapted to this method of treatment. Gonorrheal cases are bad ones for vaginal section and drainage, because of the large amount of exudate that occurs and because the germs are liable to remain latent and cause trouble after an indefinite length of time. Tubercular abscesses are also bad cases for this treatment. Puerperal cases are probably the most satisfactory, as the exudate tends to entirely disappear by absorption after the pus has been removed. It is seldom indicated in gonorrheal cases, except in the presence of large abscesses. I recently looked up my statistics of drainage cases for five years, and found that about 10 per cent. required subsequent operation.

I am glad Dr. Noble brought out the point that many of these cases are completely cured by this operation; 90 per cent. of mine were cured. I pack with gauze and remove it gradually, so that it is all removed by the end of the fifth or seventh day. With this method, convalescence is more rapid, less painful, and the amount of suppuration is less than with tube drainage. Exploratory vaginal section is of great value in selected cases of puerperal cases, and in my experience it has occasionally been a life-saving procedure.

DR. G. B. MASSEY, Philadelphia—I come from Philadelphia, but do not feel guilty of the Philadelphia error mentioned by Dr. Cushing. I remember protesting in the Philadelphia Obstetrical Society against flooding the abdomen with pus as long as ten years ago, claiming that mere lancing of the abscess at its lowest point was sufficient. In treating these acute abscesses, the vaginal puncture ought to be made early, to avoid perforation of the bowel.

DR. HUGO EHRENFEST, St. Louis, Mo.—The effect of vaginal drainage is dependent on the location of the pus. We must differentiate between an abscess in a tube, in the peritoneal cavity, or one in the parametrium. The results are undoubtedly excellent when pus is in the parametrium, but not so good in pyosalpinx, where the abscess cavity is lined by mucous membrane, which offers a good shelter to the germs. I am fully in accord with the statement made by Dr. Watkins that gonorrheal cases do not give as good results as puerperal cases, and we find the explanation in the fact that in gonorrheal cases the suppuration occurs in the tubes, while in puerperal cases the abscess usually is in the parametrium or pelvic cavity.

DR. THOMAS G. CULLEN, Baltimore—In those cases where the inflammatory exudate lies between the folds of the broad ligament instead of in the tubes or pelvic cavity we invariably drain extraperitoneally as advocated by Dr. Noble. We make an incision similar to the one employed in the appendix operation and on arriving at the peritoneum gradually by blunt dissection reach the connective tissue of the broad ligament without injuring the peritoneum. In one case the peritoneum was peeled back so readily that I thought we had perforated it, thereby entering the pelvic cavity. Fearing that some pus might have entered the pelvis, I made a median incision and found the peritoneum everywhere intact, but it was so thin that the dividing wall was thinner than parchment. Great care must be exercised in the evacuation of these extraperitoneal broad ligament accumulations.

Dr. Gordon's point is a good one. After making a transverse incision one inch in length through the vaginal mucosa just posterior to the cervix, I gradually peel upward, following close to the posterior surface of the uterus. As soon as the peritoneum is felt this is punctured with a uterine dilator which can not injure any pelvic structures. If the opening in the vault be too small two uterine dilators introduced simultaneously and at right angles to one another will easily afford the necessary space. Where there are purulent accumulations in the pelvis careful scrutiny should be made to determine if secondary pockets exist. Both tubes should also be examined and they can be split and drained if necessary. The mere opening of Douglas' sac with no further search is often of little value on this very account. In acute cases the walls of the abscess sac rapidly collapse, but in chronic cases the resultant scar tissue prevents obliteration of the abscess sac for some time, and great care must be taken to maintain free drainage.

DR. NOBLE, in closing—I am pleased at the unanimity of opinion on this subject. Dr. Humiston spoke of puerperal cases, to which I have alluded. The operation does the most good in puerperal cases. It not only cures the immediate trouble, but saves the woman's tubes. You will seldom have to take them out when you drain, provided the puerperal case is not one of gonorrheal infection. Ninety per cent. of cases, when properly incised, do best when drained with nothing at all. Leave them alone, provided you do not made a "puncture." Dr. Kelly's work has done us much good, and also some harm, because the term puncture indicates a little hole, and usually too small an opening is made. I oftentimes make an opening from one bone to the other, opening up the pelvis widely. If you make it that way, big abscess cavities will collapse and cure themselves without any trouble. If we have a small abscess, and that is the class of cases in which the operation is least applicable, we may have to pack to get it to close up. I almost never drain with gauze or tubes. It often lessens the value of the work.

I, too, have suffered from the teaching of the Philadelphia school, and the best result I have been able to get with the radical operation is 27 per cent. mortality in the complicated cases. This is shocking when you can get a 2 per cent. mortality with the drainage operation.

As to the comparatively bad results in gonorrhea, this agrees with my own opinion, and is indicated by the fact that I state in my paper that I have operated on but a single recent case of gonorrheal abscess. In old gonorrheal cases, however, where the woman has had pus tubes for years, incision and drainage have given good results. I am fully in accord with the view that the gonorrheal cases are least adapted for the drainage operation.

In one point I can not agree with Dr. Cullen. Instead of going in from above, I think it far better to work from below. I never make an incision above Poupart's ligament, unless the abscess distinctly points in the groin. If the subcutaneous tissues are infiltrated, so that you know the abscess is coming out along the round ligament, or just under the skin, then make an incision there, but where the exudate is deep in the broad ligament, it is much more easily and better reached through the vagina. Neither need you fear a hernia afterwards. In almost every case drained above Poupart's ligament a hernia results. So far as I know, I have operated on about sixty of these cases, and I have never injured the ureter, have never had any hemorrhage, nor injured the bowel.

## Clinical Report.

### SUPPRESSION OF THE SECRETION OF URINE FOR SEVEN AND ONE-HALF DAYS

WITHOUT SEVERE SYMPTOMS OF UREMIC POISONING, THE PATIENT RECOVERING.

GEORGE SEILER, M.D.

ALMA, WIS.

I. B., a saloon- and store-keeper in the country, aged 48, was taken sick with "lumbago" June 6, 1902. This lasted about three days. On June 9, the patient had an attack of renal colic and passed about 75 to 100 renal calculi the size of a millet seed and some as large as small peas. The urine passed contained a little blood. June 14 he had another attack of renal colic and from this day on the excreting faculty of the kidneys was entirely suppressed for seven and one-half days.

The patient is a very heavy-set man, weighing 250 pounds. His abdominal walls are so thick from fat that palpation of the abdominal organs is very difficult. He was never seriously sick up to last September, when he had his first attack of renal colic after and during which he passed a number of renal calculi of the size of small peas. He was then free from an attack up to the present time.

Previous to the suppression of urine, which occurred June 14, he passed a little less than the daily usual amount of urine and complained of some pain, especially in the right lumbar region on deep pressure and without it. In the afternoon of June 14, he had an attack of colic again for which I gave a hypodermatic injection of morphin, which relieved the pain. I then gave him nitrate of potassium with extract of henbane, ½-grain doses of calomel and bicarbonate of soda every fifteen minutes followed by sulphate of magnesia. The next morning, as he had not passed a drop of urine, I introduced a soft catheter, but did not get any urine. The same was the case June 16.

Treatment was continued, with the addition of warm wet applications to the lumbar region and later wet packs twice a day. In the evening Dr. Tenney of Alma saw the case with me and suggested tincture of digitalis in 10-drop doses every three hours and Rochelle salts repeated oftener. I had also given a hypodermatic injection of pilocarpin, one-third grain at 6 p. m., which produced a copious sweat lasting fifteen or twenty minutes. June 17 the patient became drowsy and vomited often greenish slimy water with great force; no urine by catheter; bowels moved often.

June 18 and 19 the patient was in almost the same condition but more drowsy and vomiting oftener, no urine secreted, pulse and temperature normal. I kept up the wet pack and pilocarpin injections twice a day and also gave two drops of croton oil in glycerin. June 20: condition the same, treatment continued. Towards evening patient had a severe spell of pain in the right lumbar region with pains lancinating toward the right testicle and glans penis, probably caused by the stone, which was suspected to blockade one ureter, moving towards the bladder. A hypodermatic injection of morphin and atropin relieved the pain.

On the morning of June 21 his condition was unchanged, save that he was not so drowsy and did not vomit so often; no urine by catheter. Dr. John Lyman of Eau Claire, Wis., who was called in consultation, advised continuation of treatment and ½-grain doses of calomel every one-half hour continued for forty-eight hours as advised by Senn. As there was some dulness over the region of the right kidney he introduced a trocar at three different places, but only withdrew some blood, no urine. This excluded a hydronephrosis. Any other operation was, of course, out of the question. That evening the patient passed about one-half pint of almost clear straw-colored urine, which showed slight traces of blood under the microscope. The same treatment was continued and the patient passed almost a gallon of urine in the next twenty-four hours, vomited from one to four times a day, his drowsiness disappeared and urine was passed without pain, but the patient suffered a great deal of pain at the point where the trocar was inserted and temperature went up to 100 or 101. The pain diminished in the course of four days.

June 23: patient was very much improved and urinated freely more than a gallon of clear urine without a trace of blood. His bowels were kept open by Rochelle salts; the hypodermatic injections of pilocarpin were discontinued, as was also the calomel, as traces of ptyalism appeared. June 26 the patient was able to sit up and improved steadily. July 17: patient passed some gravel about the size of small peas and of irregular form; he has continually a sensation as if needing to pass water and a drawing feeling in his penis and still some deep-seated pain over the right kidney; otherwise he improved steadily and attended to his business.

The principal questions in this remarkable case are: First, what was the cause of the suppression of the secretion of the urine? 2. If there was an obstruction of one ureter—probably the right one where patient complained of the most pain—why did not the other kidney secrete urine? 3. Is it, as some authorities say, possible that if one kidney does not work the other one will in a sympathetic way refuse to work? The greatest wonder is that the patient did not show more profound symptoms of uremic poisoning and that he did not die in coma.

Is there such a case on record? I have heard there is nothing new under the sun, but I thought the case remarkable enough for publication.

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**Organization of the Medical Profession.**—The medical profession has a power for good in the community which is not equaled by that of the clergy or the legal fraternity. Its power is, however, not exerted. It is dissipated by lack of concerted effort, and wasted by internal difference of opinion. . . . Why is it that after a hundred years of practice among the people, the educated and the ignorant alike, our influence is so transient, so feeble, that the most absurd fad, the most hare-brained delusion, the most fantastic fraud that comes along spreads its pernicious poison as rapidly among the people as fire in tow? Where is the educational power over the people of which we boast in our addresses and applaud in our after-dinner speeches? How loyal are the people to us, because of our single-mindedness and devotion to them in their sickness and affliction? How much weight has the opinion of the medical man in a public matter, and with what smiling indifference do not those who make the laws listen to his protests? There is something wrong here. There is manifestly some foolish want of thought in this ridiculous situation. . . . There are doubtless many things to which this state of affairs can be ascribed. One cause, however, stands out as first in importance. It is lack of organization.—Sweeney, in *St. Paul Med. Jour.*

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## CHAUVINISM, ETC., IN MEDICINE.

Dr. Osler's address[1] on "Chauvinism in Medicine" before the Canadian Medical Association is an excellent one and is worthy of attention. Chauvinism in medicine is a reality, and it is not limited by national boundaries alone; it may exist in limited sections of the same country—though perhaps its most striking manifestations are seen existing together with other national prejudices. The subvariety of provincialism which Osler makes is strongly in evidence, and there was a certain appropriateness in that his address was delivered in a province where any outsider, however eminent he may be, unless with British or colonial qualifications, must take a course in a local institution before receiving license to practice medicine. We have troubles of our own; sectionalism is not unknown in the United States, as is innocently shown in many unconscious ways by most of us. We are all fallible and none of us live quite up to our ideals. The main thing is to have our ideals and try to live up to them. There is, however, more of it shown in the medical laws of Canada than in those of any commonwealth on this side of the border. Whether Dr. Osler's hearers made any personal application of his remarks to themselves we do not know, but they might have done so with profit. We all have our weaknesses and faults, and it is good discipline to be kindly reminded of them, a service we trust we are always willing to receive and reciprocate. At any rate we should be.

American physicians, and in this we here include Canadians, have one advantage over foreigners in this respect. It is a sort of fashion with us to go to Europe and broaden our minds and culture by imbibing from the time-honored founts of knowledge and thus free ourselves from a narrow Americanism that might grow too rank on our own soil. It is true that sometimes the tourist returns with an exaggerated notion of his acquisitions, but even that helps to check a too prominent nativistic Chauvinistic tendency, although it may be at the expense of occasionally substituting for it an even more objectionable one. It is the misfortune of our European confrères that they do not more often reciprocate; they might even find something to profit them here and enlarge their "Weltcultur" and ideals. We have here two tendencies to combat, only one of which is mentioned by Dr. Osler; the other is a lack of appreciation of our own professional work and standing, which is as bad in its way as Chauvinism. This, however, as Mr. Kipling says, is another story.

It would be interesting to know how Dr. Osler's remarks were taken by his hearers where he spoke of the value of a knowledge of the literature of the profession of different countries. How much does the average Canadian practitioner know of American current medical literature? Probably not much, and the American still less of what is being done in Canada. Of course, the greater loss is to the one who has the largest range of literature to miss, but the matter is not one for congratulation on either side. There is at the present time altogether too much nationalism, provincialism or Chauvinism, whatever one may choose to call it, in a profession that ought to be free from it, on both sides of the line. At present we fear (and this is suggested to us by a passage in one of the other addresses delivered at the meeting) that American medical literature is more familiar over there in the form of the "Medical Short Cuts" and allied publications than by those that are really creditable and representative. This is not what it should be.

What Dr. Osler says about the multiplicity of medical examining boards is true, but we think he hardly recognizes sufficiently the conditions in this country that have made the evils he mentions unavoidable. It will take time for matters to so arrange themselves here that any uniformity or reciprocity can be general between the states in the matter of medical registration. The reasons for this seem too obvious to require statement to our readers, and the present state of affairs, bad as it is in some respects, is infinitely better than the old one of absolutely no restriction—or the unquestioning acceptance of diplomas from every source. As he intimates, the condition is less excusable in Canada than in the United States, as there has there been a greater uniformity in medical education and the boards have had a longer existence, and all he says may be accepted without qualification for the Dominion. In our own country we will probably gradually relieve the greater hardships in many ways; for example, by providing for special examinations, as in Maryland, and by giving a larger discretionary power to examining boards. There will, in our opinion, however, be no uniformity until the general government makes a qualification of its own, which must be obtained by all who enter its service and which the states would in time be compelled to recognize of their own accord. Whether he is right in his view that examination for license should exclude the more theoretical and scientific subjects absolutely is an opinion open to question, but there is little doubt but that injustice may be done by giving too much importance to them, especially in the examinations of other than recent graduates. The machinery of our registration boards is new and has not yet worked itself into perfectly smooth action; in time we can expect better things and all criticisms like those of Dr. Osler have their utility.

1. THE JOURNAL A. M. A., Oct. 4, p. 855; and Phila. Med. Journal, Sept. 27, and Canada Lancet, October.

There are many other things in the address that deserve comment, but space is wanting. It is one that makes for professional righteousness, and we therefore the more willingly call the attention of our readers and the profession generally to its admirable exposition of matters that we can not take too much to heart. Its main contention for a broader liberialism in our ideas and practice, free from all local provincial and parochial littleness of feeling and speech, has seldom if ever been so well stated to our profession.

## THE HEMOLYMPH GLANDS IN PERNICIOUS ANEMIA.

Until recently the pathogenesis of pernicious anemia belonged to the most obscure of medical problems. While far from elucidated as yet, the newer observations in regard to cellular toxins, especially the lysins, and still more particularly the hemolysins, seem to afford a new and secure basis from which to attack anew the problems of the evident excessive destruction of red corpuscles in this disease.

The simplest and most direct explanation of the excessive destruction of red corpuscles would be that it is due to the presence in the plasma of the blood of a hemolysin, whatever the origin of that substance might be. No one has demonstrated the appearance of any special autohemolysin in the blood of patients with the disease, however, and the conditions are probably not so simple as suggested. Continuing for a moment this thought of a special hemolysin, the next step would be to produce an antihemolysin, just as can be done in the case of so many of the other lysins and similar substances.

This pleasant dream must give way for the present to a consideration of the facts as they stand from the results of recent studies, especially by the application of careful microscopic methods. We refer to the investigation by Warthin[1] of the changes in the hemolymph glands in pernicious anemia. In eight cases thoroughly studied he finds that there is excessive phagocytosis of red cells in the spleen, the bone marrow, the lymph and also the hemolymph glands. Hunter claimed that the destruction of the red cells occurs within the portal area, but Warthin finds the bone marrow and prevertebral lymph and hemolymph glands contain abundant evidences of blood destruction in the form of phagocytes, in the interior of which red cells are undergoing disintegration. In the hemolymph glands are found varying degrees of dilatation of the blood sinuses, phagocytosis of red cells, often associated with increase in size and apparent increase in the number of the glands. Corresponding well to the intermittent clinical course of the anemia these changes are found in varying degrees in different cases. The changes described are not regarded as absolutely specific of pernicious anemia, because they are found also in sepsis and other similar processes, and in less degree even normally. It is the extent they reach that is significant. The pigmentation of the liver and kidney in this disease is a secondary one, due to the deposition of hemosiderin in granular form in the endothelial cells of these organs.

Viewed in this light the fundamental question in the etiology and genesis of pernicious anemia is: What is the cause of the increased phagocytosis of red cells? This question can not be answered now. Two possibilities are considered. There may be at work unknown substances that act primarily on the phagocytes, stimulating them to increased consumption of red cells. Or there may be unknown substances that so alter the red cells that they become fit prey for the phagocytic activities of the cells in the spleen, the marrow, the lymph glands and the hemolymph glands that normally dispose of useless red cells. There is warrant for assumptions like these in the action of toluylenediamin, which experiments show causes increased destruction of red cells by phagocytosis in the organs just named. This destruction of red cells by phagocytes is called hemolysis also, but it is an intracellular hemolysis, or erythrocytolysis, as distinguished from the hemolysis that may occur in the circulating blood in the presence of certain substances that cause diffusion of the hemoglobin.

1. American Journal of Medical Sciences, 1902, cxxiv, 674-718.

## THE UNCERTAINTY OF LIFE.

One of the largest life insurance companies of this country recently published a pamphlet containing a list of 435 persons at whose deaths policies were paid by the company during the year 1901, though the insurance on their lives had been in force less than a year. Considering how carefully medical examiners are selected as a rule and how thoroughly medical examinations are made, for the so-called big companies at least, this would seem a surprisingly large number of deaths early in the insured term. It represents actually about five out of every thousand policy-holders for whom risks were assumed by the company during the year. The risks were at least of average amount, so that nearly one million of dollars was paid out. As it is well known that first-year premiums on life policies are practically entirely eaten up by the expenses incurred in securing the risk, these precociously matured policies represent, we may say, a total loss to the company. Far from considering this item of loss as due to any defect of the insurance system or any failure of their medical examiners to detect pathologic conditions that were manifestly present and should not have been missed, the company in question sets it down to the inevitable uncertainty of human life, and uses the startling story of this costly bit of life insurance experience as a precious idea for their advertising department.

The company's officials are justified in assuming this very sensible position by data that may be obtained from an analysis of the death list. Unfortunately, the cause of death is not given, and the omission mars the value of the document considerably for physicians. The deaths are distributed throughout the year as follows:

85 in the first quarter, 118 in the second quarter, 109 in the third quarter and 123 in the fourth quarter. The lowest number of deaths in any one month was 16, in the first month. The highest number was 51, in the seventh month. The fact that the deaths were more frequent toward the end of the year would seem to absolve the medical department of the company for much of the apparent blame that attaches to it. An interesting item of comparison in this matter is the alleged fact that nearly ten thousand applications for life insurance of nearly $30,000,000 in amount were refused by the same company during the same year.

The deaths occurred among persons of all classes and ages. There were students as well as professors and almost every possible occupation has its representative in the death list from that of the proverbially healthy farmer to the dangerous life of the train hand and locomotive engineer. There are a full dozen physicians in the list, three of whom died during the first three months of their insurance. None of these had policies for more than a thousand dollars except one, and he had but two thousand on his life, so that it seems improbable that any inkling of impending fate had come to them or they would surely have applied for larger amounts, the medical examination being the same for applications up to $25,000.

## INTERNATIONAL RECIPROCITY IN MEDICINE.

A Vienna surgeon[1] is coming to Chicago to treat the daughter of a millionaire. A Chicago doctor has been asked to go to England to treat the daughter of one of the nobility. If some English physician is now summoned to Austria the circle will be complete and we may expect the capitalization of a syndicate to exchange physicians between countries. Our only authority, however, for the invitation from a British peer to the Chicago doctor of great self-repute and advertising ability is his statement in the advertisements in the Chicago newspapers. These say that he has refused the tempting offer, with its munificent remuneration, and will heroically devote himself to the patients dependent on him here. This decision is wise. In view of the thorny path in Germany for our export meat because of inferior pork, the nation should see to it that all products sent to foreign countries are of first quality. With this condition assured, we shall not object to the American physician taking his place in "the American invasion."

## ONE ADVANTAGE OF TEA DRINKING.

The fact recently noted in our news columns (October 4, p. 848) of the lesser cholera mortality among the Chinese in the Philippines than among the natives and even less than among Americans in proportion to cases is possibly explainable. It is well known that the Chinese, or at least a large proportion of them, are much less addicted to raw water drinking than are other races. Their common drink is tea, of course in infusion, and in the boiling of the water they unconsciously protect themselves. That they do not escape entirely is easily accounted for, the cholera germ reaches their intestinal tract in articles of food which are not only not disinfected, but probably often directly infected with the germs. It is said, indeed, that the introduction of cholera into Manila was through the importation of Chinese vegetables. Cholera rages in China among the Chinese, but we can readily imagine it might be much worse were their habits as favorable for imbibing the germ as is the case among other races. It is not a racial but a dietetic peculiarity that protects them, and the lone redeeming feature in their hygienically sinful lives.

1. See General News column, p. 922.

## INCOMPETENT HOSPITAL MANAGEMENT.

A recent unfortunate occurrence of the death of a patient in a well-known hospital from an overdose of strychnin calls for some comment. It reveals a very bad practice—which we trust is unique—of leaving the making up of solutions of powerful drugs in the hands of undergraduate nurses, and the presumption, to call it no worse, of a superior nurse who, with or without the connivance of the pharmacist, introduced the use of one-grain tablets for the purpose of making up such solutions. Another very bad feature of the case is the attempt to lay all the blame on the undergraduate nurse who administered the fatal dose, under the not unnatural supposition, under the circumstances, that she was giving the ordinary tablet dose. What business a hospital could have with one-grain tablets of strychnin is hard to appreciate, and the practice followed by the responsible parties is as reprehensible as their conduct in regard to the young woman was objectionable. The blighting of her career for an error, serious as it was in its results, for which others who go uncensured were primarily responsible, is inexcusable. The case illustrates the lack of proper appreciation of their functions on the part of some who are too ready to take on responsibilities that in no wise belong to them, as in thus ordering the one-grain strychnin tablets, and then to put off the consequences of their misdoings on comparatively untrained and irresponsible subordinates. The censure of the administration of the hospital by the coroner's jury seems well deserved, and we trust its medical staff will succeed in promptly securing the reforms they are demanding.

## THE NEW GOSPEL OF DIRT.

A writer announcing himself as a surgeon in one of the great hospitals and professor in a physiomedical college of one of our leading cities and medical centers, has recently given to a metropolitan journal an article nearly two columns long in condemnation of bathing, especially in the winter time. According to him a bath is a perilous thing. It is a custom of an innervating civilization, the natural man gets along without it—the more bath tubs and hot water the weaker the race. We can admit that the habitually unbathed individual is stronger in a sense and to some senses, but our author goes farther and claims that with every hot or cold bath in cold weather we invite pneumonia; that only the excretion loaded cuticle can give the proper protection. He has learned, he says, from actual experiment, on himself and others, that the skin does not need bathing to be clean. Dressing to suit the weather and

changing underclothing sufficiently often is all that is needed. Perspiration is also apparently considered as an abnormal symptom, or rather as a bad habit that we must learn how to prevent. To refrain from baths and avoid perspiration are the important rules of hygiene inculcated by the reformer. The conventional hobo best fills the bill, and is therefore, as we may reasonably assume, to be taken as the nearest to the ideal of personal hygiene in actual practice. It would be pleasing to learn how this surgeon manages in his surgical work, or does he find in the abnormal conditions there occurring reason for temporarily abandoning his principles? It is to be hoped he does.

### EDUCATION AND INSANITY.

Some of the newspapers in this country have picked up a press report of the recent utterances of a French physician that seek to establish a correlation between the increase of insanity and the spread of popular education. This is not a new idea; it has long been held that much of the increase of insanity is due to the increasing complexity in modern life and the educational demands are only the attempt to meet the changed conditions. It is not education that increases insanity; it is the condition that needs education as its antidote. The old saying that a little knowledge is a dangerous thing is true enough, and a misused knowledge of reading devoted only to ephemeral and morbid publications, the dime novel and the yellow press does not conduce to the best mental health. This, however, hardly comes under the head of education, and it is a question whether the environments of modern civilization bear harder on the absolutely uneducated or the partially or imperfectly educated. There are a good many elements in the question to be considered, and judging from the effects of contact with civilization on savage or inferior races it would seem possible that even a very little tincture of modern culture would be, in its way, a safeguard. There is much truly said of the evil effects of overstrain in mental training, but that is an avoidable error and its results are not probably chargeable against education in general. There is little doubt that our modern civilization is hard on certain weaklings who would have been better off in some respects as regards their mental health if they had lived a hundred years ago, and to this fact is perhaps to be attributed considerable of the increase of insanity of the present day. It is a mistake, however, to credit any considerable part of this to education; it is an example of the fallacy of confounding the cure with the cause, which in one way or another we, as physicians, not infrequently meet. Education does not necessarily lead to happiness—it adds to our responsibilities and anxieties—and, as the preacher says, "with much wisdom there is much grief, and he that increaseth knowledge increaseth sorrow"; but, after all, wisdom is the principal thing and the complete bliss of ignorance, were it desirable, is at the present time beyond the reach of even the poorest.

**Anesthesia and Alcoholics.**—In operations on alcoholic subjects it is often wise to give them a drink of spirits an hour or less before its performance. These people are more restless than others and often require a greater quantity of the anesthetic to abolish sensibility, but long deprivation of drink only tends to intensify those unfavorable tendencies.—*Inter. Jour. of Surg.*

## Medical News.

### CONNECTICUT.

**Personal.**—Dr. Joseph A. Cooke, Meriden, is completing his European trip by journeying through England and Ireland.

**Physician Forfeits Bond.**—Dr. Patrick J. Callaghan, Waterbury, charged with illegal practice of medicine, failed to appear when his case was called, September 23, and his bond of $300 was forfeited.

**Cancer Doctor Acquitted.**—In the case of A. Stanley Maine, a cancer doctor of Hampton, charged with violation of the medical practice act of 1893, the jury, after an hour's deliberation, returned a verdict of "Not guilty."

**Yale Clinical Building Opened.**—The new clinical building for Yale Medical School, given by Mrs. Thomas G. Bennett of New Haven as a memorial to her mother, the late Mrs. Jane Winchester of Prospect Hill, was opened at the opening of the college year. It represents an outlay of $110,000.

**August Mortality.**—During August 1348 deaths were reported, 46 less than the previous month, 38 more than in August, 1901, and 46 less than the August average for five years. The death-rate was 17.8 per 1000 per annum. The deaths from infectious diseases were 503, or 37.3 per cent. of the total mortality.

### DISTRICT OF COLUMBIA.

**Personal.**—Dr. George N. Kober, Washington, has accepted the appointment as a member of the consulting board of the Washington Asylum Hospital.

**College Opens.**—The session of the medical department of the National University, Washington, was opened, October 6, with a lecture by Dr. D. Olin Leech.

**Blacklist Redivivus.**—Washington physicians have inaugurated another effort to protect themselves against non-paying patients. Ten years ago a similar organization was started but was short-lived. The new association known as the "Doctor's Protective League" proposes to provide each member with a list of unwilling payers, and also to formulate a fee-bill.

**Interne Dismissed for Striking Patient.**—Dr. D. T. Stuart, resident physician at the Emergency Hospital, Washington, was dismissed, September 24, by Dr. H. L. E. Johnson, executive officer of the institution. The reason for this action was that Dr. Stuart had struck a patient attempting suicide, who had caught the physician's finger between his teeth and was biting it. Dr. Stuart admitted the charge, but said he considered that the circumstances justified his act.

### ILLINOIS.

**Smallpox** has been reported to the Illinois State Board of Health during the past week from seven places in six counties.

**Personal.**—Dr. Samuel M. Wylie, Paxton, has returned from his trip to Russia, Egypt and the Holy Land.——Dr. James H. Finch has returned to Champaign after a summer abroad.——Dr. Charles B. Taylor has entered on his duties as assistant superintendent of the Illinois Asylum for Feeble-Minded Children, Lincoln.

#### Chicago.

**Twenty Students Graduated.**—At the convocation of the summer class of the medical department of the University of Chicago, October 2, twenty students were graduated. Dr. Norman Bridge delivered the doctorate address.

**Physician Exonerated.**—Dr. Mark T. Goldstine, who was held pending the investigation by the coroner's jury of the death of a patient in the office of the physician, was exonerated of all blame in connection with the man's death.

**Typhoid Deaths.**—Only twenty-two typhoid fever deaths were reported during the week—the fewest in any week since that ended August 2. In that week 16 such deaths were reported—a sudden increase from a weekly average of 8 during the month of July. For the successive weeks following that of August 2 the reported deaths were 28, 45, 53, 51, 55, 43, 38, 28 and 22 respectively.

**Diphtheria on the Increase.**—During the week the Health Department laboratory received an increase of requests for cultures, of which a majority have been diphtheria. Physicians report that the diphtheria is of the malignant, lymphatic type, the child often not complaining at all of a sore throat, and the first cultures frequently fail to reveal the typical diphtheria bacillus. Physicians should be on their guard against this form of the disease.

**To Vote on Additions to County Institutions.**—The county board has decided to submit to the voters at the election next month, a proposition to issue $500,000 in bonds, of which $350,000 is to be devoted to the remodeling of the insane asylum and hospital at Dunning, erecting additions thereto and also constructing a group of cottages for consumptives, and $125,000 for the erection of a ward for epileptics, a ward for contagious diseases and a ward for alcoholic cases at the County Hospital.

**Personal.**—Dr. Clara Ferguson, formerly of the staff of the county institutions, Dunning, has returned from a year of study in Vienna, and is now at her home in Tipton, Iowa.——Dr. Jacob Frank has been elected president and Drs. Berthold Pirosh, and Theodore B. Sachs, vice-presidents of the medical staff of the Orthodox Jewish Home for the Aged.——Dr. Harry E. Clyde has been appointed junior professor of surgery in the Illinois Medical College.——Drs. Franklin H. Martin and Thomas E. Roberts have been elected medical directors of the Mutual Life Insurance Company of Illinois.

**The Week's Mortality.**—The total deaths reported for the week ended October 4, 471, are 25 more than for the previous week and 52 more than for the corresponding week last year. This is equivalent to an annual death-rate of 13.48 per 1000. The increase is due chiefly to the effects of the unfavorable weather on chronic invalids; the deaths of those over 60 years of age are nearly 10 per cent. greater than the week before and one-third greater than a year ago. Deaths from violence also account, in part, for the increase—44 during the week, 29 the week before and 32 in the first week of last October.

**Medical Colleges Open.**—The opening of Northwestern University Medical School began with a reception to the older medical teachers, October 7, followed by an address by Dr. Henry Gradle on "A Glimpse into the Future of Medicine." The registration thus far is larger than in any previous year. Dr. F. Robert Zeit takes the chair of pathology for the year, vice Dr. A. P. Ohlmacher, resigned. The medical department of Rush Medical College, affiliated with the University of Chicago, opened October 1. The number of new students was cut down materially because of a new rule requiring one year's credit in college work for admission.

**Presbyterian Hospital Affairs.**—A few weeks ago a death by misadventure occurred at the hospital, from an overdose of strychnin, the blame for which was placed on an undergraduate nurse, who was forthwith discharged, with her professional career blighted. The evidence given at the inquest was so unsatisfactory and the attitude of the superintendent to the coroner's physician so inimical that the jury censured the management for not reporting the death to the coroner's office, for leaving poisonous medicines where untrained nurses had free access to them, and for employing as pharmacist a non-registered pharmacist. The attention of the State Board of Health having been called to this matter, an investigation was made, as a result of which the superintendent promised that in future medicines should be given out only on prescriptions of regularly practicing physicians, individual prescriptions being made for each patient; that nurses are to mix no medicines, which are to be furnished them in the form of separate doses and that drugs are to be kept and dispensed by a licensed pharmacist. Various changes have been suggested, among them the establishment of a separate training school for nurses, but thus far no definite information is at hand. It has also been rumored that the medical superintendent might be replaced.

## INDIANA.

**Personal.**—Dr. William Stemen, Fort Wayne, who returned from the Philippine Islands two years ago, will locate in Colorado Springs.

**The Physicians' Defense Company** of Fort Wayne has been licensed to transact business in Missouri. The company guarantees to protect its members from all prosecutions for malpractice.

**Grave-Robbing Scandal.**—The daily press of Indianapolis has been filled with harrowing stories about the wholesale robbery of graves in the cemeteries around Indianapolis, to furnish anatomic material for the medical colleges of the city. Six demonstrators of anatomy are at present under bonds and seven colored men who are said to have been the actual grave robbers are under arrest. We have as yet received no authoritative information regarding the matter.

**Central College Opens.**—The Central College of Physicians, Indianapolis, opened for the year October 2. In a week the new college building on Senate Street will be ready for occupancy. The chair formerly held by the late Dr. Joseph Eastman will be filled by Drs. Thomas B. Eastman and Thomas B. Noble. Prof. Lotz of Shortridge high school will take the place of Prof. G. Benton as professor of chemistry. Dr. Louis Burckhardt, professor of physiology, will succeed Dr. John T. Scott as professor of obstetrics.

**Medical Practice Act Upheld.**—By unanimous decision of the Indiana Supreme Court, October 7, the law of 1901 defining the practice of medicine was declared constitutional, and the powers of the courts to enforce it against all persons who attempt to practice without a license was fully sustained. The case came up from Lawrence County, where Prof. George Parks was arrested for practicing without a license, having treated a boy who is a cripple by what is known as "magnetic healing." The court upholds only reputable schools of medicine, and decides against the practice of "christian science" or healing by faith. The State Board of Examination and Registration will proceed at once against that class under the decision. A full report of the decision will appear in our medicolegal department.

## MARYLAND.

**Typhoid at Warwick.**—Dr. Howard Bratton, health officer of Elkton, accompanied by State Inspector Mitten of Baltimore, has made an investigation of the typhoid epidemic in Warwich, Cecil County, where 14 cases are reported, and one death has occurred.

### Baltimore.

**Pasteur Institute.**—There are 18 patients now under treatment at the Pasteur Institute of the City Hospital. This is the largest number yet under treatment at one time.

**Colleges.**—The introductory lecture at Baltimore University School of Medicine was delivered September 30, on the subject "Something New," by Prof. J. W. C. Cuddy.——The vacancies in the chairs of surgery and therapeuties at the Woman's Medical College have been filled by Drs. Pearce Kintzing and L. Gibbons Smart, respectively.

**Death and Disease.**—The deaths for the week ended October 4 were 166, being an annual death rate per 1000 of 15.55. There were 19 deaths from consumption, 11 from typhoid fever, and 4 each from pneumonia and diphtheria. Of typhoid fever 56 new cases were reported. A few cases were also reported of measles, scarlet fever, mumps and whooping cough.

**Heating the Quarantine Hospital.**—Dr. Sidney O. Heiskell, city quarantine physician, proposes to overcome the difficulties of heating the Quarantine Hospital, consequent on the scarcity of anthracite coal, by running the pipes from the steam disinfecting plant over to the hospital. This plant burns soft coal, which is likely to be abundantly available.

**Changes at Bayview.**—At the Bayview Asylum the following changes have been made in the medical staff. Dr. Irving J. Spear, resident physician of the insane department, has resigned, and Drs. C. D. Gruver and P. L. Travers, assistant resident physicians, have resigned to begin private practice. Drs. Samuel Lee Magness and Robert Baker Lawson have been appointed assistant resident physicians.

**Personal.**—Dr. Henry W. Cook has returned from Canada and resumed his duties at Johns Hopkins Hospital.——Dr. Frank G. Mayer has returned from a visit to the Yellowstone Park and the Pacific Coast.——Dr. M. H. Carter has gone on a trip to California, Salt Lake City and other points in the West.——Dr. Howard A. Kelly has returned from his vacation, part of which was spent in moose hunting in New Brunswick.——Dr. Harry Friedenwald has been elected professor of diseases of the eye and ear in the College of Physicians and Surgeons, succeeding his father, the late Dr. Aaron Friedenwald.——Dr. William F. Pentz has been appointed deputy collector of internal revenue of Baltimore.——Dr. William Lee Howard has returned from a five months' cruise in his schooner yacht. Most of this time was spent off the coast of Newfoundland and Labrador.

## MINNESOTA.

**Personal.**—Dr. George R. Curran, Worthington, has returned after a year of study abroad and will locate in Mankato.

**To Found Convalescent Hospital.**—A deed was filed at Marshall, October 2, whereby John M. Burke conveys to the Winfield-Masterson-Burke relief foundation $4,000,000 worth of real and personal property, to be used as an endowment for a hospital for convalescents.

**Hospital Opened.**—The new St. Luke's Hospital, Duluth, was opened for inspecion by the public, September 30, and

patients were transferred from the old building on the following day. The new building has 28 private rooms in addition to the wards, and will accommodate 75 patients. The building and site have cost $100,000.

**College Opens.**—The College of Medicine and Surgery of the University of Minnesota opened for the season, September 22, with a lecture by Dr. John W. Bell, on "The Study of Internal Medicine." The registration this year will probably not be as large as last year. The old men are returning in good numbers, but the freshman class will probably be smaller than usual. This is due to the fact that one year's work in the academic course is required this year.

**Bacteriologist Ill with Glanders.**—Dr. Orianna McDaniel, assistant bacteriologist in the State Board of Health Laboratory at the University of Minneapolis, is suffering from glanders, contracted while she was engaged in bacteriologic investigation at the laboratory on June 30. Being given prompt attention she made an apparently complete recovery, but recently a relapse occurred, and the general condition is now far from satisfactory, though the medical attendants are in doubt whether the present illness is altogether chargeable to the original trouble.

## NEW YORK.

**Tuberculosis Hospital Contracts Awarded.**—The state tuberculosis hospital commission has awarded the contracts for the hospital at Raybrook, Essex County, near Saranac, at a price of $54,880.

### Buffalo.

**Colon Bacilli in Niagara River.**—The city bacteriologist, Dr. Bissell, reports having found bacilli of the colon group in the Niagara river water supply. As this is indicative of sewage contamination Health Commissioner Green again advises the boiling and filtration of all water.

**Personal.**—Dr. and Mrs. Matthew D. Mann have returned from Europe.——Dr. and Mrs. Herman Mynter have returned from a trip abroad.——Drs. Edward J. Meyer, Henry C. Buswell, John Mesmer and James Whitwell have returned from a fishing excursion in Northern Canada.——Dr. Alexander McNeil Blain has returned from Europe.

**Anti-Tuberculosis Crusade.**—The Buffalo Anti-Tuberculosis Society, under the chairmanship of Dr. Benjamin G. Long, recently met and strongly endorsed the health commissioner for sending to all tuberculosis cases the instructions for their care and methods of disinfection for the sick room and for houses after the death of such patients. Churches and societies are again asked to invite any of the corps of speakers to address them on the nature and prophylaxis of tuberculosis. Last season many of the larger societies and orders were addressed, and much interest was shown by the lay hearers in the subject discussed.

**Hospital Wins Suit.**—The Buffalo Hospital of the Sisters of Charity is defendant in an action for $10,000 damages brought by Lena Duman as administratrix of the estate of Frank Duman who died at the hospital in August, 1901. It is claimed by the widow that Duman went to the hospital to be treated for delirium tremens and engaged board and treatment for $7 per week. She says that he was given a room on the second floor, and that owing to lack of attention he was allowed to jump out of a window, August 15, and fell thirty feet, sustaining injuries which were fatal. The hospital authorities admitted in answer to the charges that Duman fell thirty feet, but deny the other allegations of the plaintiff, and the court sustained the hospital authorities and non-suited the plaintiff, who will appeal.

### New York City.

**Bequest to Hospital.**—By the will of the late Samuel D. Babcock, $20,000 is bequeathed to St. Luke's Hospital.

**Site for Rockefeller Institute.**—It is announced that by the sale of a building at the corner of Madison Avenue and Forty-second Street to Dr. Andrew H. Smith and Davison H. Smith for $250,000, another portion has been added to the site on which the Rockefeller Institute for Medical Research is to be erected.

**Police Patent Medicine Testimonials Rebuked.**—Fifteen policemen attached to various precincts have been ordered to appear for trial at police headquarters on charges of "attempts to influence the public." The charges grew out of advertisements in which appear photographs of 15 policemen accompanied by as many letters setting forth the alleged beneficial effects of a certain nostrum.

**Scurvy on In-Coming Ship.**—A British ship reached this port after a voyage of 197 days from Japan. The great length of the voyage was attributed to the foul bottom of the ship, long calms and baffling winds. The regulation supply of lime-juice gave out when the voyage was only half completed, and on reaching this port seven of the men were in their bunks helplessly ill with scurvy, while many others of the crew were afflicted with that temporary form of evening blindness known familiarly on the tropical seas as "moon blink."

## OHIO.

**Entire Hospital Staff Resigns.**—It is announced in the daily press that the staff of physicians, thirty-two in number, of the Toledo Hospital, resigned in a body because the board refused to dismiss the superintendent, Miss Kent.

**Fugitive Captured.**—Dr. John C. Modrack, Marion, who for the last six months has been a fugitive from justice, under an indictment for an attempted criminal operation which resulted in the death of Miss Laura E. Hite, was arrested in Chicago September 9.

**College Openings.**—The medical department of Western Reserve University opened without formal ceremonies, October 1.——Toledo Medical College opened its twenty-third annual session September 25. The opening address was by Dr. Albert L. Steinfeld, on "Recent Advances in Medicine."

**Personal.**—Dr. Ezekiel M. Foster, Portsmouth, with his wife and daughter, sailed, October 7, for Europe, where Dr. Foster will spend a year in study and research.——Dr. W. C. Ellis, Sardinia, will take charge of the practice of Dr. Foster of Portsmouth during the absence of the latter in Europe.

**Acquitted on Bribery Charge.**—Dr. Frank W. Daykin, Cleveland, who has been on trial charged with having given Councilman Charles A. Kohl $2000 as a payment on a $5000 bribe for his vote on a natural gas ordinance, was declared not guilty of the charge by a jury in the Criminal Court, October 7.

**Youngstown Quarantines Against Cleveland and Pittsburg.**—The Youngstown board of health has practically established a quarantine against Cleveland and Pittsburg on account of smallpox there. A resolution was passed by the board asking citizens to refrain from visiting either city except on business.

## PENNSYLVANIA.

### Philadelphia.

**A home for convalescent children** is to be erected at Gynedd by Mrs. H. P. McKean and Mrs. F. E. Bond of Philadelphia.

**New Hospital Buildings Nearly Completed.**—The new buildings for the Children's Hospital and for the Hospital for Diseases of the Skin, departments of the Philadelphia Hospital, are nearing completion; but for lack of heating facilities neither these nor the Maternity Hospital building, recently completed, can at present be used. The Department of Charities has applied to councils for $25,000 for heating plants.

**Personal.**—Dr. and Mrs. J. William White recently returned from a four months' trip to Europe, during which they visited Sir Frederick and Lady Treves.——Dr. Horatio C. Wood, professor of therapeutics and materia medica of the University of Pennsylvania, lately returned from Europe after an absence of nearly a year.——Dr. George A. Pfahler, for several years assistant chief resident physician of the Philadelphia Hospital, has voluntarily resigned the position. No one has yet been elected to fill the place, although there are many applicants.——Dr. Woody, of the Municipal Hospital, and Dr. Ralph Coombs, of the Kensington Hospital for Women, are the two new members of the staff of the German Hospital.

**The free hospital for poor consumptives**, which has a sanatorium at White Haven, Pa., is planning to do more active work in Philadelphia against the disease. An effort is to be made especially to secure systematic registration of consumptives, thus giving opportunity for help to such patients for the protection of themselves, their families and the public; also to protect against contaminated houses. It is the purpose also to establish clinics solely for the treatment of phthisis, and to distribute pamphlets, particularly in the slums, stating the causes of the disease and explaining the methods of precaution against its contagion. Effort will be made to carry the movement throughout the state. An aid to the cause is the recent gift by Mrs. Thos. L. Kane of a house on the summit of the Alleghany Mountains at Kane, Pa., to be used by the Summit Hospital of that place for the care of consumptives.

**Medical College Year Begins.**—On October 1 the seventy-eighth session of Jefferson Medical College was opened with

an address by Hon. William Potter, president of the Board of Trustees, and an introductory lecture by Dr. Henry C. Chapman. The enrolment of students was announced as about 750.——On the same evening the Medico-Chirurgical College held its opening exercises. Introductory addresses were made by Dr. F. Savary Pearce and by Dr. Seneca Egbert, dean. The new dispensary and laboratory building has cost more than $150,000. It is of steel and brick-arch fire-proof construction, five stories high. The first floor is devoted to the medical, surgical and dental dispensaries of the hospital. On the second floor are the dental school and prosthetic laboratory, and on the third, fourth and fifth floors, respectively, are the chemical laboratory, the pathologic and bacteriologic laboratories and the histologic laboratory and dissecting room. Each laboratory is furnished with individual apparatus for from 50 to 100 students.

### Pittsburg.

**West Penn Medical Opens.**—The medical department of the Western Pennsylvania University began its new year October 1 with a freshman class of nearly 200.

**Addition to Hospital.**—A contract for the erection of an operating room, as an improvement to the Reineman Maternity Hospital, has been awarded. The addition is to be of brick and will cost about $5000.

**Efficiency of Vaccination.**—All pupils attending public, parochial or private schools are again to be examined by representatives of the Bureau of Health to ascertain the efficiency of their vaccinations, or to be vaccinated if not already protected.

**Bill for Emergency Hospital.**—At the request of a number of Pittsburg's physicians a bill will be introduced into the legislature to provide for an Emergency Hospital. The purpose of such a hospital is particularly to care promptly for the many accident cases happening in Pittsburg and its vicinity.

## GENERAL.

**Col. Smart Goes to the Philippines.**—Col. Asst.-Surg.-Gen. Charles Smart, U. S. A., has been ordered to the Philippines as chief surgeon and leaves shortly for the islands.

**Cholera Worse in Iloilo.**—The conditions in the province of Iloilo, island of Panay, P. I., are reported so serious from the epidemic of cholera that towns are being deserted and ordinary sanitary measures are impossible.

**Dr. Lippitt Retired.**—Surgeon Thomas McC. Lippitt, U. S. N., has been placed on the retired list on account of physical disabilities incurred in the line of duty. Dr. Lippitt has been in the navy since June, 1898, having been appointed from Virginia. He was surgeon of the gallant band of marines which helped to guard the legations in Pekin during the Boxer troubles, and was advanced in grade in recognition of his efficient services in that campaign.

**Dr. Adolph Lorenz,** professor of orthopedic surgery in the University of Vienna, Austria, who comes this week to Chicago on a professional errand, has a world-wide reputation as one of the greatest authorities in his specialty. Beginning his professional career as assistant in the surgical clinic of Professor Albert, he was obliged to give up general surgery on account of an intractable eczema of the hands caused by the antiseptic solutions in constant use in the clinic. Influenced by his chief, who had given considerable attention to scoliosis, he turned to orthopedics and first became more generally known by his prosecution and completion of the studies begun by Professor Albert, on this same subject. Professor Lorenz is best known as the author of a method of bloodless reduction of congenital hip dislocation—to treat a case of which is his present errand. Few perhaps know that before he developed this treatment he practiced the cutting method of Hoffa and added important details to its technic. Besides these better-known works he has contributed to other orthopedic problems and devised a number of deformity apparatus.

## CANADA.

**Typhoid at Winnipeg on the Increase.**—The Winnipeg General Hospital is at present crowded with typhoid patients, many of whom come from outside points.

**The Toronto Orthopedic Hospital** was opened October 5. Dr. B. E. McKenzie and Dr. H. P. H. Galloway will be the surgeons in charge. The hospital has at present thirty inmates. The building and equipment cost $40,000.

**Personal.**—Dr. James Bruce, who has been a house physician in the Montreal General Hospital, has gone to Sydney, C. B., to practice. Dr. Bruce graduated with honors at McGill in June, 1901, being first honor man and final prize man in medicine.

**Appointments.**—Dr. L. W. May, a recent graduate of McGill University, has been appointed medical officer of the new Infectious Diseases Hospital at Ottawa.——Dr. W. H. Cullen, another recent graduate of McGill, has been appointed clinical assistant in the Manhattan State Hospital, Ward's Island, New York.

**Montreal General Hospital.**—The Montreal General Hospital report for September shows that during that month 236 patients were admitted into the wards, 214 were discharged, and there were 17 deaths. The average daily sick in residence was 179, the highest on any one day being 193. The out-door consultations numbered 2664.

**Action for Fee.**—Three thousand dollars for medical services is asked by Dr. A. Marien, Montreal, in an action begun against Mr. A. A. Lussier, Varennes, Que., who was shot and seriously wounded last April by his son. Dr. Marien says that he attended the patient for over a fortnight, and had to have a substitute to deliver his lectures at Laval University. The account is contested and an offer of $1000 has been made.

**College Re-openings.**—The opening lecture at Trinity Medical College was delivered by Dr. George A. Bingham, professor of applied anatomy, September 24, who contrasted the lives of the scientific man, Sir James Simpson, and a contemporary, a London quack of considerable repute, drawing deductions therefrom. The opening lecture at Toronto University in the medical department, was delivered, October 2, by Dr. J. J. McKenzie, professor of pathology, who dealt with the life and work of the celebrated German pathologist, Virchow. Both colleges have their usual quota of freshmen.

**Diseased Immigrants.**—The recent charges in a New York paper that there were associations in Canadian cities for the purpose of smuggling diseased immigrants and Chinese into the United States, has brought up in Montreal, again, the whole question of allowing diseased immigrants into Canada and of the permitting of their being dumped into Montreal when rejected by the immigration official of the United States, located in that city. It will probably be the means of opening the eyes of the Dominion government to the fact that they had better follow in the footsteps of the American government rather than permit these undesirable people landing at Canadian ports and gaining access to the country without having passed through a rigorous medical examination. Montreal is calling on the Canadian government to protect her from the influx of contagiously-diseased aliens.

**Quebec's Medical Board and the Increased Standard.**—McGill is particularly wrathy over the proposed new regulations of the Provincial Medical Board with regard to the admission of candidates to the study of medicine in that province. Dr. E. P. Lachapelle, so loud has been the clamor in the lay press, has had, as president of the board, to issue a letter of explanation with regard thereto. The matter first came up a year ago when Dr. Brophy, of the board, proposed that the privilege of studying medicine should be accorded only to B. A.'s. Explaining the requirement of a "Cours classique complet," Dr. Lachapelle says that it is for the French people, and whatever the English consider an equivalent will be accepted from them. The chief object is to stop the system by which boys are stuffed for examinations. In an interview accorded the lay press, Dr. Ruttan, late registrar of the medical faculty, and now professor of chemistry, states, in view of McGill's combined arts and medical course of six years, that the endorsement of the resolution of the Provincial Medical Board by the legislature would inflict needless hardships on students. In McGill circles it is felt that the resolution was adopted with a view of preventing the working of Dr. Roddick's bill for a Dominion Medical Council in the province of Quebec. Dr. Ruttan states that the English universities in Quebec will vigorously oppose the adoption by the legislature of any such measure.

## FOREIGN.

**Passow Called to Berlin.**—Prof. A. Passow of Heidelberg has been appointed to the chair of otology at Berlin left vacant by Trautmann's death.

**Americans to Erect English Army Building.**—The new building for the army medical department, to be erected at Woolwich, Eng., is to cost $15,000. The contract has been given to a Pittsburg company.

**Argentina Quarantines Against Rio Janeiro.**—The Argentine government has decided to impose quarantine on all

vessels arriving at Argentine ports from Rio Janeiro, Brazil. This action is taken because of the appearance of several cases of plague in the Brazilian city.

**Unethical Ads. in the Daily Press.**—A new daily paper, *Die Zeit*, has been founded in Vienna, and the managers announce that no advertisements will be received that conflict with medical standards. They have appealed to the local Medical Chamber for guidance in the matter.

**Public Course of Instruction in Disinfection.**—The authorities at Breslau have organized a free course of instruction in measures for disinfection. It is held at the University Institute of Hygiene and on completion of the six-day course of lectures the candidates pass an examination before the director of the institute and the chief of the city disinfection bureau. They then receive a certificate. The course is proving so popular and so useful that other universities are planning a similar innovation, and many towns without official institutes.

**Campaign Against Charlatans in Germany.**—The Medical Chamber at Berlin recently secured the condemnation of a charlatan in another town for unwarranted claims in his advertisements. He published among others a certain signed testimonial from a person cured of pulmonary tuberculosis in four months by his remedies. The case was investigated by a committee from the chamber, and the claims shown to be false. The affection was an apical catarrh and had not been entirely cured, while the statements in regard to previous medical treatment were false. A fine of about $75 was imposed.

**Virchow as a Historian and Philologist.**—*Janus* publishes a list of 72 works on subjects connected with the history of medicine that Virchow contributed to literature. He used to say that his *Archiv* contained more historical works than any other medical journal, and in fact was for years their only refuge. He was always interested in the science of language, and his article on medical terminology, published in the *Berliner klin. Wochenschrift* in 1875, is a classic, applicable to all times and sciences. He traced his name to a small village and lake in Pomerania, both called Virchow. It is probably of Slavonic derivation.

**Convalescent Homes in France.**—France has had these institutions since 1650, but Germany has only recently recognized their importance and introduced them. The two near Paris are the Vincennes, with 460 beds and 84,000 inmates in the course of the year, and the one at Vesinet with 330 beds and 64,000 inmates. There are also two smaller ones at Roche Guyon and Garches. They are all part of the general public hospital system, the "Assistance Publique." Six other cities have similar establishments, and there are a number of private ones. The French seem to consider that the care of the sick poor should be extended to the regaining of the working capacity. A circular has recently been issued by the authorities enjoining this point of view on the hospitals and physicians employed to look after the sick poor. The large country hospitals are to provide a convalescent home and the smaller ones to set apart a ward for the purpose. The expense is to be shared by the local and national boards as soon as the necessary legislation is completed.

**Cuba's Health Good.**—There is no lapse in the reforms and sanitary improvements which the United States provisional government over Cuba established. Dr. Charles Finlay, the new sanitary officer of Havana, reports the mortality rate of that city for August to be the smallest since April. There was decreased mortality, Dr. Finlay says, "in almost every group of diseases which are amenable to sanitary improvements." The most important and interesting passage in the report is that with which it concludes. It runs as follows:

> Havana, and, so far as we have been able to ascertain, the rest of the island, have continued free from yellow fever and from smallpox, though a fatal case of the former disease came on the steamship *Vigilancia* from Vera Cruz on the 4th of August and died at Las Animas Hospital on the 7th. The success which has so far attended our efforts to prevent the propagation of the disease during the conveyance of patients from vessels in the harbor or from the immigration camp at Triscornia to Las Animas Hospital, as well as during their detention at that hospital, in this season of the year, is not only highly satisfactory to us as showing that our vigilance has not abated since the inauguration of the Cuban Republic, but also as an additional demonstration of the fact that in order to attain that result all that is needed is to guard the patient from being bitten by mosquitoes.

For all this the United States can take some credit, for, though Dr. Finlay has been a resident of Havana for many years, he was born and educated in this country.

## LONDON LETTER.

### Finger Prints as Evidence.

In the case of a man charged with burglary finger prints were given in evidence. This is the first occasion on which this system of identification has been used in the courts of justice in this country, although it has been employed on a large scale for identifying habitual criminals in India. In this case the person committing the burglary had left the print of his fingers and left thumb on the newly-painted window-sills. An expert took photographs of those prints, and on examining the finger-prints in the possession of the police he came to the conclusion that the prisoner was concerned in the burglary. The jury, who examined the photographs with much interest, found the prisoner guilty, and he was sentenced to seven years' penal servitude.

### Death Following a Mosquito Bite.

A man aged 43, a gatekeeper in the service of the Hon. Artillery Company, while engaged at the company's headquarters at Finsbury, London, was bitten on the elbow by a mosquito. Considerable swelling and inflammation followed, septic pneumonia set in and death soon ensued. The coroner's jury brought in a verdict of death from septic poisoning following a mosquito bite.

### Cancer Research.

At a meeting of the executive committee of the Cancer Research Fund, under the direction of the Royal Colleges of Physicians and Surgeons, it was decided to issue advertisements in the medical journals inviting applicants for the post of general superintendent of cancer investigation. The duties of the office will include: 1, the general direction of laboratory investigation; 2, the supervision of workers appointed by or receiving grants from the committee; 3, the collection of statistical, dietetic, topographical and other information; 4, the organization of a system of correspondence with home, Colonial, Indian, and foreign laboratories and workers; 5, attendance at the meetings of the executive committee or any committee appointed by them for special purposes relating to the investigation. The general superintendent may also be appointed director of the central laboratory. It was further decided that application should be made to the Colonial Office for assistance in obtaining information as to the prevalence of cancer in the various colonies of the British empire, the mode of life, food and general environment of the inhabitants of these colonies, and other circumstances that might seem to have a bearing on the question of the origin of cancer. It was also agreed that enquiries should be made as to investigations on cancer now being pursued in laboratories in the United Kingdom, and preliminary arrangements for starting laboratory work in the examination hall, Victoria embankment, were discussed. The authorities of the Cancer Hospital have entirely reorganized their pathologic department, with the view of undertaking researches of the most modern lines into the etiology and treatment of cancer. In addition to their present accommodation, a new laboratory is being fitted up with all requisite appliances for investigation, and will shortly be in working order. A pathologist is to be appointed at a salary of $1250 a year, who will work at some of the many problems connected with cancer in conjunction with and under the direction of Mr. H. G. Plimmer, who has been pathologist for many years to the institution, and who now becomes director of the laboratory.

## Correspondence.

### Paraffin Will Not Prevent X-Ray Burns.

CHICAGO, Sept. 12, 1902.

*To the Editor:*—The statement has recently appeared in several medical journals and in the lay press, and Dr. J. Mount Bleyer, New York, is given as authority for it, that a layer of paraffin interposed between an *x*-ray tube and the surface to be exposed will prevent *x*-ray burns. To test this matter I have performed the following experiment: I have been exposing to *x*-rays daily an area the size of a quarter, in the center of which was an epithelioma the size of a little finger nail. The surrounding surface has been protected by sheet lead, the surface exposed has been covered each time with a layer of paraffin 1/16 inch thick. In spite of this paraffin the surface now shows a well-marked *x*-ray dermatitis, not more or less than I would expect without the paraffin. This shows conclusively that an *x*-ray burn can be produced under paraffin; and I am willing to assert further that the paraffin has absolutely no influence in preventing *x*-ray effects on tissues.

The idea that paraffin will furnish a protection against *x*-ray burns is doubtless a lineal descendent of the suggestion that

such burns may be prevented by vaselin, which was long since proven false. Such inaccurate statements are most mischievous. For example, the statement that *x*-ray burns could not be produced with static machines has probably been the cause of as many *x*-ray burns as any single mistake, and the same may be true of paraffin, if the impression becomes general that it will prevent burns. Operators will go ahead, relying on it for protection, and the false sense of security thus engendered is in itself a factor of great danger. Statements like the above about paraffin are likely to go unrefuted for a long time, because no one has the opportunity or takes the trouble to experimentally establish or disprove them. It is for this reason that I have thought the above experiment worthy of report.

This may not be a bad opportunity to call attention to the fact that there is absolutely no reason to believe that anything which is transparent to *x*-rays will prevent the occurrence of *x*-ray burns. For example, it is widely believed that the interposition of a layer of aluminum, particularly if it is grounded, will prevent *x*-ray dermatitis. I have in numerous cases produced *x*-ray dermatitis on surfaces which have been constantly protected by aluminum, and I have at present a guinea-pig which has a considerable *x*-ray burn that was produced through aluminum, and with the aluminum and the lead plates grounded with a water connection, so that electro-static effects were entirely excluded. I have no hesitation in asserting that I can produce an *x*-ray effect on the tissues through any substance which is not opaque to *x*-rays, whether aluminum, paraffin or what not. The only essential to the production of *x*-ray effects is that the *x*-rays themselves reach the tissues.

Yours truly, WM. ALLEN PUSEY.

## Queries and Minor Notes.

ANONYMOUS COMMUNICATIONS will not be noticed. Queries for this column must be accompanied by the writer's name and address, but the request of the writer not to publish his name will be faithfully observed.

### ADVERTISING HIS EQUIPMENT AND ABILITY.

A correspondent sends us a marked copy of the *Mount Ayr* (Iowa) *Journal*, of September 30, from which we quote the following, omitting the names:

"We call special attention to the medical card of Dr. ——— in this paper. The Dr. has added several pieces of furniture to his office of the finest make, thus fitting his office equal to any in the state. The outfit includes a large ——— static electric machine with X-ray attachment, a ——— wall plate battery, and an ——— surgical table of the latest and most complete type made. These were added last week to his well equipped office, and hence is prepared to treat any and all diseases as successful as the physicians in the larger cities."

The exactness and completeness with which the new equipment is named are internal evidence that the editor of the *Mount Ayr Journal* had professional assistance in writing the copy, and that Dr. ——— was not surprised to find it in the paper.

### THE PERCENTAGE OF PHYSICIANS IN EUROPE.

*Dr. Emil Amberg, Detroit,* says: "On page 849, under 'Foreign,' under 'The Percentages of Physicians in Europe,' mistakes must have been made. It *probably* reads for '10,000' inhabitants, and even then, *Vienna* or *Berlin* must be wrong, I think."

Vienna should be 1.3 instead of 13. Otherwise the whole item is as correct as was our authority—the *Wiener klinische Rundschau*, Sept. 14, 1902, page 730. The ratio is to each 1000 inhabitants.

### FILES OF MEDICAL PUBLICATIONS TO BE GIVEN AWAY.

*Z., of Connecticut,* writes: "I have in my possession unbound files of *Medical Record*, JOURNAL A. M. A., *Therapeutic Gazette*, *American Journal of Obstetrics*, and other journals nearly complete; very few copies missing. These files I will cheerfully donate to any medical college, library or individual who will pay the freight on them. I will pack them and send them to depot. Most of these journals are since 1898." THE JOURNAL will send name and address on application.

## State Boards of Registration.

**Vermont Report.**—Dr. S. W. Hammond, Rutland, secretary of the Vermont Board of Medical Censors, reports the examination held at Burlington, July 9 and 10, as follows: Number of subjects examined, 8; questions, 80; percentage required, 70; written examination; total number examined, 13; number passed, 7; failed, 6. The 7 who passed were graduates of the following colleges: Physicians and Surgeons, New York; University of Michigan; Woman's Medical College, Philadelphia; Laval University; and three from the University of Vermont. The 6 who failed were from the Dartmouth Medical College, Laval University, Baltimore Medical College, University of Vermont and two from the University of Baltimore.

**Wisconsin Report.**—Examinations by the Wisconsin Board of Medical Examiners were held at Madison, Wis., July 8 and 9, 1902. Percentage required to pass, 75, with no less than 60 in any one branch. Total number examined, 66; passed, 53; failed, 13. The following is a summary furnished us by Dr. Filip A. Forsbeck:

PASSED.

| Candidate. | Sch. of Pract. | College. | Percent. |
|---|---|---|---|
| 16 | R. | College of Physicians and Surgeons, Chicago. | 79.2 |
| 18 | R. | College of Physicians and Surgeons, Chicago. | 88.0 |
| 19 | R. | College of Physicians and Surgeons, Chicago. | 84.6 |
| 23 | R. | College of Physicians and Surgeons, Chicago. | 84.6 |
| 24 | R. | College of Physicians and Surgeons, Chicago. | 83.2 |
| 31 | R. | College of Physicians and Surgeons, Chicago. | 84.2 |
| 33 | R. | College of Physicians and Surgeons, Chicago. | 80.1 |
| 36 | R. | College of Physicians and Surgeons, Chicago. | 81.7 |
| 37 | R. | College of Physicians and Surgeons, Chicago. | 86.7 |
| 39 | R. | College of Physicians and Surgeons, Chicago. | 82.1 |
| 40 | R. | College of Physicians and Surgeons, Chicago. | 82.7 |
| 50 | R. | College of Physicians and Surgeons, Chicago. | 81.1 |
| 51 | R. | College of Physicians and Surgeons, Chicago. | 82.5 |
| 54 | R. | College of Physicians and Surgeons, Chicago. | 85.1 |
| 11 | R. | Rush Medical College, Chicago | 86.0 |
| 12 | R. | Rush Medical College, Chicago | 79.5 |
| 13 | R. | Rush Medical College, Chicago | 82.0 |
| 22 | R. | Rush Medical College, Chicago | 88.7 |
| 26 | R. | Rush Medical College, Chicago | 84.7 |
| 29 | R. | Rush Medical College, Chicago | 85.4 |
| 35 | R. | Rush Medical College, Chicago | 87.5 |
| 46 | R. | Rush Medical College, Chicago | 84.5 |
| 47 | R. | Rush Medical College, Chicago | 77.3 |
| 52 | R. | Rush Medical College, Chicago | 87.1 |
| 53 | R. | Rush Medical College, Chicago | 84.7 |
| 55 | R. | Rush Medical College, Chicago | 85.3 |
| 56 | R. | Rush Medical College, Chicago | 83.0 |
| 57 | R. | Rush Medical College, Chicago | 81.6 |
| 58 | R. | Rush Medical College, Chicago | 84.6 |
| 59 | R. | Rush Medical College, Chicago | 83.1 |
| 63 | R. | Rush Medical College, Chicago | 87.4 |
| 65 | R. | Rush Medical College, Chicago | 92.5 |
| 14 | R. | Northwestern University, Chicago | 85.4 |
| 17 | R. | Northwestern University, Chicago | 82.5 |
| 27 | R. | Northwestern University, Chicago | 79.4 |
| 30 | R. | Northwestern University, Chicago | 82.7 |
| 38 | R. | Northwestern University, Chicago | 89.4 |
| 43 | R. | Northwestern University, Chicago | 86.5 |
| 44 | R. | Northwestern University, Chicago | 82.6 |
| 61 | R. | Northwestern University, Chicago | 89.2 |
| 2 | R. | Gross Medical College, Denver | 76.3 |
| 6 | H. | Hahnemann Medical College, Philadelphia | 87.0 |
| 41 | H. | Hahnemann Medical College, Chicago | 79.1 |
| 42 | H. | Hahnemann Medical College, Chicago | 88.1 |
| 28 | H. | Chicago Homeopathic College | 90.2 |
| 20 | ‡ | University of Minnesota | 83.2 |
| 21 | R. | University of Pennsylvania | 87.2 |
| 45 | R. | University of Iowa | 76.1 |
| 48 | R. | University of New York | 75.0 |
| 64 | R. | University of Michigan | 86.3 |
| 32 | R. | Trinity Medical College | 81.3 |
| 49 | R. | Marion Sims Medical College, St. Louis | 81.3 |
| 60 | R. | St. Louis College of Physicians and Surgeons. | 79.2 |

FAILED.

| | | | |
|---|---|---|---|
| 1 | H. | Hahnemann Medical College, Chicago | *76.6 |
| 3 | O. | American School of Osteopathy | *82.0 |
| 4 | O. | American School of Osteopathy | 67.3 |
| 5 | H. | Chicago Homeopathic Medical College | 69.0 |
| 15 | H. | Chicago Homeopathic Medical College | 72.2 |
| 7 | † | College of Medicine and Surgery, Chicago | 73.1 |
| 8 | E. | Bennett Medical College, Chicago | *78.1 |
| 9 | R. | Keokuk Medical College (Iowa) | 68.4 |
| 10 | ‡ | University of Minnesota | 73.7 |
| 25 | R. | Rush Medical College | *77.7 |
| 62 | R. | Rush Medical College | 71.6 |
| 34 | R. | Marion Sims Medical College | 75.1 |
| 66 | R. | Chicago Medical College (N. W. Univ.) | 67.2 |

* Conditioned. † Physio-Medical. ‡ The University of Minnesota has both regular and homeopathic schools of medicine.

**New Jersey Report.**—Dr. E. L. B. Godfrey, secretary of the State Board of Medical Examiners of New Jersey, reports the examination held at Trenton, September 16-17, as follows: Number of subjects examined in, 9; number of questions, 90; percentage required to pass, 75; written examinations; total number examined, 28; passed, 23; failed, 5.

PASSED.

| Candidate. | Sch. of Pract. | College. | Year Grad. | Percent. |
|---|---|---|---|---|
| 49 | H. | Hahnemann Med. Coll., Philadelphia. | 1902 | 75.0 |
| 51 | R. | University of Vermont | 1902 | 92.7 |
| 52 | R. | Medico-Chirurgical College, Phila. | 1902 | 80.1 |
| 53 | R. | Jefferson Medical College, Phila. | 1893 | 79.9 |
| 56 | H. | Boston University School of Medicine. | 1900 | 94.0 |
| 50 | R. | Baltimore Medical College | 1902 | 83.7 |

PASSED.

| Candidate. | Sch. of Pract. | College. | Year Grad. | Percent. |
|---|---|---|---|---|
| 60 | R. | Baltimore Medical College | 1902 | 78.7 |
| 62 | R. | Baltimore Medical College | 1902 | 75.0 |
| 61 | R. | Coll. of Phys. and Surgs., Baltimore | 1902 | 89.2 |
| 63 | R. | Baltimore University School of Med. | 1900 | 75.0 |
| 64 | R. | University of Turin, Italy | 1899 | 89.1 |
| 65 | R. | Woman's Medical College, Phila. | 1902 | 92.0 |
| 66 | R. | Columbian Univ., Washington, D. C. | 1897 | 86.3 |
| 54 | R. | Columbia University, New York | 1901 | 82.3 |
| 67 | R. | Columbia University, New York | 1900 | 79.9 |
| 68 | R. | Columbia University, New York | 1902 | 87.7 |
| 69 | R. | Dartmouth Medical College | 1892 | 78.8 |
| 70 | R. | University of Montpellier, France | 1889 | 75.3 |
| 71 | R. | University of Naples, Italy | 1898 | 81.6 |
| 72 | R. | University of the South | ... | 77.5 |
| 73 | R. | Coll. of Phys. and Surgs., Baltimore | 1902 | 85.1 |
| 75 | R. | Coll. of Phys. and Surgs., Baltimore | 1902 | 77.0 |
| 76 | R. | Yale Medical School | 1893 | 82.5 |

FAILED.

| | | | | |
|---|---|---|---|---|
| 55 | R. | Baltimore University School of Med. | 1898 | 57.1 |
| 57 | R. | Shaw University (Leonard Med. Sch.) | 1902 | 64.8 |
| 58 | R. | Jefferson Medical College, Phila. | 1902 | 69.5 |
| 59 | H. | Hahnemann Medical College, Phila. | 1899 | 71.1 |
| 75 | R. | University of Naples, Italy | 1888 | 62.1 |

Beginning with the examination in June, 1903, each applicant for examination will be required to file with his application a recent photograph of himself, with autograph signature, duly attested under the seal of a notary.

In the matter of interstate reciprocity of medical license, the policy of the board in endorsing the licenses issued by other states whose examining requirements are substantially the same as those of New Jersey, provided that the applicant fully meets the academic and medical requirements of the state, is gaining favor both with the profession and with other state boards. This policy places the admission of an applicant on the basis of his personal fitness and the thoroughness of his examination, which is believed to be the fairest and the most equable method of endorsement so far devised.

## Marriages.

O. A. TOOKER, M.D., to Miss Myrtle Parker, both of Lansing, Mich., September 25.

JAMES L. NIBLACK, M.D., to Miss May Brown, both of Lake City, Fla., September 16.

GEORGE MOSSE NORTON, M.D., to Miss Leila Walton, both of Savannah, Ga., October 6.

JOSEPH NISBET LE CONTE, M.D., to Miss Lillian King, both of Atlanta, Ga., October 8.

EDWIN WILSON RHEA, M.D., to Miss Helen Macdougall, both of Oil City, Pa., September 24.

HUGH CABOT, M.D., to Miss Mary Codman Boit, both of Brookline, Mass., September 22.

OTTO FLOYD ROGERS, M.D., to Miss Vesta Triplett, both of Bloomington, Ind., September 24.

HUGH PRESCOTT ROSS, M.D., Campbell, Minn., to Miss Claudia Cross of Champion, Minn.

CHARLES H. BROOKE, M.D., to Miss Gertrude F. Hermann, both of Brooklyn, Md., September 24.

LEON F. RICHARDSON, M.D., Terril, Iowa, to Miss Gertrude Shank of Fairfax, Iowa, September 24.

HALVOR HOLTE, M.D., Crookston, Minn., to Miss Henrietta Lunde of Maplebay, Minn., September 25.

LUDWIG VON MURALT, M.D., Zurich, Switzerland, to Florence Hull Watson, M.D., Farnhurst, Del., October 6.

SAMUEL R. CUNNINGHAM, M.D., Indianapolis, to Katherine D. Johnson, M.D., of Logansport, Ind., September 22.

LEONARD C. BERRY, M.D., to Miss Marie Orendorf, daughter of Dr. Henry Orendorf, both of Louisville, Ky., September 20.

R. STRUBLE GIBBS, M.D., Reswick, Shasta County, Cal., to Miss E. Florence Owen, of Warsaw, N. Y., at Sacramento, Cal., September 10.

## Deaths.

**John Byrne, M.D.**—In the death of Dr. John Byrne at Montreux, Switzerland, on October 2, the American profession loses one of its most prominent specialists in diseases of women. He was born in Kilkeel, Ireland, in 1825, and pursued his medical studies in Belfast, Dublin, Glasgow and Edinburgh, graduating in the latter city in 1846. He then had about two years' hospital service in his native county during an epidemic of typhoid fever. In 1848 he settled in Brooklyn and was graduated from the New York Medical College in 1852. He was one of the originators of the Long Island College Hospital in 1856. He was a fellow of the New York Academy of Medicine, sometime president of the New York Obstetrical Society, president of the American Gynecological Association, member of the Kings County Medical Society and member of the American Medical Association. He was clinical professor of gynecology in the Long Island College Hospital and surgeon-in-chief to the St. Mary's Hospital for Women, Brooklyn. The cause of his death is supposed to have been melancholia following the death of five of his children from tuberculosis. At the last meeting of the International Obstetrical Congress at Rome, Italy, on September 15, he read a paper on cancer and the best methods of dealing with it.

**James W. May, M.D.** Cincinnati College of Medicine and Surgery, 1875, dean of the College of Physicians and Surgeons of Kansas City, Kan., professor of ophthalmology and otology, and one of the founders of that institution; a member of the Wyandotte Medical Society and president of the Kansas Medical Society, died at his home in Kansas City, Kan., after a long illness, aged 52.

**William R. Kennard, M.D.** University of Pennsylvania, Philadelphia, 1860, for twenty-four years a practitioner of Milam County, Texas, and a field and hospital surgeon in the Confederate service during the Civil war, died recently at his home in Rockdale, Texas, aged 68.

**Edward Miller Cameron, M.D.** College of Physicians and Surgeons, New York, 1853, a member of the New York State Medical Association and the Academy of Medicine, and consulting physician to Trinity Hospital, died at his home in New York City, September 28.

**Maximilian Muffat, M.D.** College of Physicians and Surgeons, Chicago, 1890, a practitioner of Palatine, Ill., was found dead by the roadside near that village, September 30. He was 50 years old and is supposed to have fallen or to have been thrown from his buggy.

**Charles H. Boodey, M.D.** Medical School of Maine, Bowdoin College, Brunswick, 1871, a resident of Cochituate, Mass., for nearly thirty years prominent alike as a physician and a citizen, died at his home, September 30, from paralysis, after a long illness, aged 64.

**Edwin E. Hunter, M.D.** Ensworth Medical College, St. Joseph, Mo., 1899, late city chemist of St. Joseph, a practitioner of Sheffield, Mo., died at St. Joseph's Hospital, Kansas City, Mo., September 24, from shock following an operation for appendicitis, aged 38.

**Daniel C. Malone, M.D.** University of Pennsylvania, Philadelphia, 1869, a member of the Lehigh Valley Medical Association and of the Northampton County Medical Society, died at his home in South Bethlehem, Pa., September 24, from anemia, aged 58.

**Edmund B. Scribner, M.D.** Kentucky School of Medicine, Louisville, 1885, a prominent physician of Louisville, Ky., died at the Gray Street Infirmary in that city, September 26, from Bright's disease, after an illness of two months, aged 45.

**J. L. Carnahan, M.D.** Cleveland Medical College, 1874, died at his home in Pittsburg, Pa., September 8, from the result of a fall from a street car the day previous, in which he sustained a fracture of the base of the skull, aged 61.

**Watson W. Archer, M.D.** Geneva (N. Y.) Medical College, 1867, coroner of Ontario County, N. Y., and for thirty-five years in practice at Clifton Springs, died suddenly at his home in that place, September 25, aged 67.

**Adelbert M. Corbett, M.D.** Wisconsin College of Physicians and Surgeons, Milwaukee, 1896, died at his home in Marshfield, Wis., from paralysis, September 22, after an illness of five weeks, aged 35.

**George J. Peters, M.D.** Western Pennsylvania Medical College, Pittsburg, 1887, an esteemed practitioner of Butler, Pa., died in that city, from consumption, September 19, after an illness of a year.

**Rufus H. King, M.D.** Medical School of Maine, Bowdoin College, Brunswick, 1847, the oldest practitioner of Carroll County, N. H., died at his home in Wolfeborough, September 17, aged 82.

**James C. Burch, M.D.** University of Maryland, Baltimore, 1862, a practitioner of Baltimore for nearly forty years, died at his home in that city, September 21, from Bright's disease, aged 64.

**John J. Haptonstall, M.D.** Medical College of Ohio, Cincinnati, 1896, died at his home in Stone Cliff, W. Va., Septem-

ber 26, from the effects of being struck by a train the previous day.

**John F. Eddelman, M.D.** Rush Medical College, Chicago, 1896, a practitioner of that city, died at Presbyterian Hospital, September 19, from typhoid fever, aged 46.

**Seth C. Lacey, M.D.** University of Michigan, Ann Arbor, 1861, died at his home in Aberdeen, S. D., September 18, after a long illness, aged 69.

**Isaac G. Woolsey, M.D.** Cincinnati College of Medicine and Surgery, died from heart disease at his home in Woolsey, Ga., September 11, aged 73.

**John Porter Gaston, M.D.** Vanderbilt University, Nashville, Tenn., 1901, died at his home near Gilbertsboro. Ala., September 20, aged 35.

**Jacob Eisenstadt, M.D.** Russia, 1887, a Denver physician, died recently at Redding, Cal., where he had gone on account of declining health.

**James Francis Hamilton, M.D.** University of Pennsylvania, Philadelphia, 1893, died at his home in Philadelphia, September 1.

**John S. Shepherd, M.D.** State University of Iowa, Iowa City, 1875, died at his home in Postville, Iowa, August 28, aged 76.

**Arthur E. Nichols, M.D.** Bellevue Hospital Medical College, 1879, died at his summer home, Charlotte, N. Y., September 28, aged 48.

**Alfred L. Gaston, M.D.** Vanderbilt University, Nashville, Tenn., 1891, died at his home in Marbuts, Tenn., September 23.

**Job S. Coggeshall, M.D.,** 1874, died at his home in Ogden, Ill., September 14, from consumption, after a long illness.

### Deaths Abroad.

**Dr. Alcina y Rance,** professor of therapeutics and materia medica in the Medical Faculty of Cadiz.——**Dr. Alexander William Michael von Hasselt,** one of the oldest medical officers of the Dutch army, aged 88.——**Dr. Josef Bergson,** formerly privat docent of internal medicine in the University of Berlin, nearly 90.——**Dr. P. Delacour,** director of the Medical School of Rennes, aged 76.——**John Climenson Day,** M.R.C.S. and L.S.A., 1846; M.D. Lond., 1884, died from lymphadenoma, August 17, aged 78.

**Dr. J. Unterlugauer,** who has lived at Graz since his retirement from active life in 1899. He was a medical officer in the Austrian Army until entrusted with the task of creating a sanitary organization in Bosnia and Herzegovina. As the result of his efforts these countries have now a model sanitary organization, smallpox has been exterminated and hospitals erected in every province, of which the Sarajevo national hospital is said to be a "European model institution."

**Thomas Frederick Grimsdale,** M.R.C.S. Eng., J.P., one of the best-known practitioners of Liverpool, died at his home in Hoylake, August 29, aged 79. He made a specialty of obstetrics and gynecology, and lectured for twenty years on these subjects in the Liverpool School of Medicine. His most notable operative achievement was the enucleation of a uterine fibroid, in 1857, one of the earliest successful cases on record.

**Arthur Barry Blacker,** M.R.C.S. Eng., 1884; L.R.C.P. Lond., 1886; M.D. Durham, 1890, superintendent of the *x*-ray department, St. Thomas' Hospital, London, and the Hospital for Consumption, Brompton, died, September 10, after a long illness, aged 40.

**Dr. Adolfo Targioni-Tozzetti,** Medical Faculty of the University of Florence, Italy, 1848, emeritus professor of comparative anatomy and the zoology of the invertebrates, in his alma mater, died at Careggi, September 18, aged 79.

**George Mickley,** M.A., M.B., M.E. Cantab., M.S.A., a specialist in nervous and mental disease, died at his home in Saffron Walden, August 10.

## Miscellany.

**Case of Naphthalin Cataract in Man.**—A. Lezenius of St. Petersburg reports the first case of an actual cataract produced in man by ingestion of naphthalin, confirming the results obtained on animals. In the experiments in this line 1 gm. of naphthalin per kilogram of body weight of the animals induced a cataract formation. In the case described the patient was a pharmacist 36 years old, robust and eyesight normal. A physician prescribed for him, in 1900, naphthalin in the dose of 5 gm. to 200 gm. castor oil as he exhibited symptoms of an inflammation of the bowels. He took the whole amount in thirteen hours at one-hour intervals. He awoke next morning with pain in the bladder and found that he could scarcely see. The perinuclear cloudiness of both lenses had increased by the ninth hour until he could only count fingers at 4 feet. Reading and writing were impossible. The cloudiness has persisted unchanged, the first phase of zonular cataract. It had not been operated on at the time the article appeared in the *Klin. Monatsblatt f. Augenhk.*

**Etiology and Treatment of "Tics."**—H. Meige of Paris has been devoting much time and study to the essence of "tics" and their treatment. He has recently published a work of 640 pages on the subject and in an address at the French Neurologic Congress in August proclaimed the chief results of his research. He says he has established that a "tic" is a psycho-motor trouble, in which the cerebral cortex is always involved to a certain extent. In this it differs from spasms, which are merely reflex manifestations of spinal-bulbar origin. A tic must be regarded as a functional act whose irregularity and inappropriateness depend on psychic disturbances. There is, therefore, a physiologic and a psychologic factor in every tic and treatment should be guided by this fact. Attentive surveillance, training of the spasmodic act under systematic direction and repetition, with suggestion and other psychic measures, ensure gratifying results.

## Book Notices.

A TREATISE ON THE PRINCIPLES AND PRACTICE OF GYNECOLOGY. By E. C. Dudley, A. M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (3d) Edition. Enlarged and Thoroughly Revised. In One Very Handsome Octavo Volume of 756 Pages, with 474 Engravings, of Which 60 Are in Colors and 22 Colored Plates. Cloth. Price, $5.00 net. Philadelphia and New York: Lea Brothers & Co.

A new edition of a book is too often only a reprint of previous editions with just enough "revision" to eliminate error. Hence, when one picks up a new edition of a work one is prepared to find the same old book. In this instance, however, a first glance shows that Dudley has more than revised his book; he has given us so much new matter and rewritten so much of the old that it is practically a new work. Some of the chapters are entirely new, and many have been rewritten. In the matter of illustrations, there is a decided improvement. Many of these are in colors and not a few of the old black and white drawings have been discarded and replaced by new and better ones. As a rule the major and most of the minor operations are illustrated with drawings to show the technic step by step. Thus curettage is illustrated by five drawings, supravaginal hysteromyomectomy by twelve, and vaginal hysterectomy by fifteen. All of the drawings and colored plates are beautiful, but what is of most importance, they are practical and helpful to the student in that they graphically carry to the mind through the eye detail in technic that is impossible to understand and appreciate from the text. The six colored plates giving in detail the technic of vaginal hysterectomy are deserving of the highest commendation both for their artistic beauty and for their practical value. Dudley's book has always been held in high esteem both by the specialist and by the general practitioner who is compelled to do a certain amount of gynecologic work, and this edition will, we are sure, make it still more popular.

GRAYSON'S DISEASES OF THE NOSE, THROAT AND EAR. A Treatise on the Diseases of the Throat, Nose and the Associated Affections of the Ear. By Charles P. Grayson, M.D., Lecturer on and Instructor in Laryngology, in the Medical Department, University of Pennsylvania. In One 8vo Volume of 549 Pages, with 129 Engravings and 8 Colored Plates. Cloth, $3.50. Philadelphia and New York: Lea Brothers & Co. 1902.

The relation of diseases of the ear to the nose and throat is so intimate that the presentation of the whole subject in a single work is very acceptable. While the work presents little that is especially new or original, at the same time it is practical and instructive. Instead of giving the treatment of these

diseases exhaustively, the author dwells only on such treatment as he has found most satisfactory. While this enables the reader who cares to do so to follow closely in the lines recommended it is disappointing to the practitioner who is looking for helpful ideas from others. The book will be particularly valuable to the beginner who wishes a terse description. It is well printed and would be a valuable addition to the library of most practitioners.

THE MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY AND CONNECTICUT. Volume IV, 1902-1903. Pp. 958. Price, $2.50. Published by the New York State Medical Association, 64 Madison Ave., New York.

To say that the last issue of the New York, New Jersey and Connecticut Directory is as good as the preceding ones is all that need be said. The general plan of arrangement is ideal, and makes reference to it easy and satisfactory. The use of different colored paper for different lists is excellent. All information in regard to medical laws, hospitals, dispensaries, medical colleges, societies and associations with lists of members as well as a large amount of other information is given. Those who have had the responsibility of getting up this directory are deserving the highest praise, and should be supported by the profession of the states covered. We hope the time will soon come when other state bodies will take up this work.

## Societies.

### COMING MEETINGS.

Mississippi Valley Medical Association, Kansas City, Mo., Oct. 15, 1902.

Conference State and Provincial Boards of Health of North America, New Haven, Conn., Oct. 28-29, 1902.

Oklahoma Territory Medical Association, Guthrie, Nov. 11, 1902.

Southern Surgical and Gynecological Association, Cincinnati, Nov. 12-14, 1902.

**Medical Society of the Missouri Valley.**—In the report of the annual meeting of this society, the new secretary was given as Dr. Wood, Sioux City. Dr. Charles Wood Fassett, St. Joseph, was elected secretary of the society.

**Carroll County (Ill.) Medical Society.**—This society met at Mount Carroll, September 16, and elected Dr. Joseph Haller, Lanar, president; Dr. Frederick H. Snow, Chadwick, vice-president, and Dr. Henry S. Metcalf, Mount Carroll, secretary.

**East Tennessee Medical Association.**—This association met at Morristown, September 25, and elected Dr. William A. Applegate, Chattanooga, president; Dr. Charles J. Broyles, Johnson City, secretary, and Dr. William J. Mathews, Johnson City, treasurer.

**Shiawassee County (Mich.) Medical Society.**—This society was organized at Owosso September 30, with the following officers: President, Dr. Dryden H. Lamb, Owosso; vice-president, Dr. R. H. Scott, Laingsburg; and secretary, Dr. Charles Shickle, Owosso.

**Harlem (N. Y.) Medical Association.**—The annual election resulted in the selection of the following officers: Dr. Edward L. Cocks, president; Dr. William H. Luckett, vice-president; Dr. Percy H. Fridenberg, secretary, and Dr. Israel L. Feinberg, treasurer.

**Washington County (Minn.) Medical Society.**—This society was organized at Stillwater, September 24, with the following officers: Dr. Willis H. Pratt, president; Drs. E. O'Brien Freligh and Burton J. Merrill, vice-presidents, and Dr. James H. Haines, secretary and treasurer.

**The Association of Hospital Superintendents of the United States and Canada.**—This association will hold its fourth conference October 14, 15 and 16, in Philadelphia. Dr. Jesse T. Duryea, general medical superintendent of hospitals, Brooklyn, is president of the association.

**Minnesota Academy of Medicine.**—At its meeting in Minneapolis, October 1, the academy elected Dr. J. Warren Little, Minneapolis, president; Dr. William Davis, St. Paul, vice-president; and re-elected for the fourteenth time, Dr. Richard O. Beard, Minneapolis, secretary-treasurer.

**Somerset County (Me.) Medical Association.**—At the thirty-eighth annual meeting of this organization, held in Fairfield, September 24, Dr. Warren G. Sawyer, Madison, was elected president; Dr. John L. Pepper, Madison, vice-president, and Dr. Howard C. Taggart, Skowhegan, secretary.

**McLeod County (Minn.) Medical Society.**—This society perfected its organization at a meeting held in Glencoe, October 1, and elected the following officers: Dr. Kee Wakefield, Hutchinson, president; Dr. David W. Bolles, Brownton, vice-president, and Dr. Frank E. Burch, Glencoe, secretary.

**Wayne County (Mich.) Medical Society.**—Almost 200 physicians of Detroit and Wayne County met at Detroit, October 2, and elected the following officers of the Wayne County Medical Society: Dr. Frank B. Tibbals, president; Dr. Charles G. Jennings, vice-president, and Dr. Hugh Mulheron, secretary, all of Detroit.

**Oconto County (Wis.) Medical Association.**—The physicians of Oconto County met at Oconto Falls, September 25, and perfected the organization of a county association. Dr. Herman F. Ohswaldt, Oconto Falls, president; Dr. O. H. Arndt, Oconto Falls, vice-president; Dr. A. S. White, Gillet, secretary, and Dr. J. C. Grant, Lena, treasurer.

**Beth Israel Hospital Alumni Association.**—This society has recently been organized in New York, to promote social intercourse among its members, and to advance the science of medicine and the art of surgery, with the following officers: Dr. Abraham Hymanson, president; Dr. George S. Mills, treasurer, and Dr. Meyer Rabinovitz, secretary.

**Laramie County (Wyo.) Medical Association.**—This society met for organization at Cheyenne, September 27, adopted the constitution and by-laws suggested by the American Medical Association for county organizations, and elected Dr. William W. Crook, president; Dr. Amos W. Barber, vice-president; Dr. William A. Burgess, secretary, and Dr. William A. Wyman, treasurer, all of Cheyenne.

**Tenth District (Mich.) Medical Society.**—A meeting was held at Grayling September 22, by the registered physicians of Roscommon, Crawford, Otsego, Montmorency, Oscoda and Ogemaw counties, for the purpose of forming a district medical society. The organization was effected by the election of the following officers: President, Dr. S. N. Insley, Grayling; vice-president, Dr. William H. Witter, West Branch; secretary, Dr. Clifford C. Curnalia, Roscommon, and treasurer, Dr. H. B. Kiehle, Rose City.

**Central New York Alumni Association of Albany Medical College.**—The second annual meeting of this association was held in Syracuse, September 24. The following officers were elected: Dr. Charles B. Tefft, Utica, president; Drs. Thomas P. Scully, Rome, Frank L. Harter, Syracuse, Irving S. Edsall, Middleville, George P. Johnson, Mexico, Walter K. Quackenbush, Trenton, and George F. Gardner, Ellisburg, vice-presidents; Dr. Frederick H. Brewer, Utica, secretary, and Dr. Earl D. Fuller, Utica, treasurer.

**St. Joseph (Mo.) Medical Society.**—The regular bi-monthly meeting of the society was held September 23. The most important business transacted was the taking of the necessary steps to affiliate the local organization with the state medical association. To this end a committee was appointed to revise the local constitution and by-laws. At the meeting of the state association last May a new constitution was adopted, which made necessary a change in the local by-laws. This change, if adopted by the society, will make it eligible for membership in the state organization.

**Central Tri-State Medical Society of Kentucky, West Virginia and Ohio.**—This society holds its 7th quarterly meeting at Huntington, W. Va., October 16. On the program we notice "Forty Years' Changes in Surgical Science and Art," by Dr. Phineas T. Connor, Cincinnati; "The Causal Relation of Defective Eyesight to Some Morbid Nervous Phenomena," by Dr. Allen P. Banfield, Buchanan, Ky., and the exhibition of specimens and photographs by Dr. B. Merrill Ricketts, Cincinnati. At the meeting held July 17, THE JOURNAL of the American Medical Association was adopted as the official organ of the society.

**International Surgical Association.**—A large number of foreign surgeons who were present at the Belgian Congress of Surgery voted the organization of an international society, to be composed of the surgeons of the world. The following were appointed a committee to prepare the constitution and by-laws of the new association: Roswell Park, for the United States; Broca, for France; Sonnenburg, for Germany; Giordano, for Italy; Reginald Harrison, for England; Gussenbauer, for Austria; Bloch, for Denmark; Willems, for Belgium; Da Isla, for Spain; Djemil Pasha, for Turkey; Rotgans, for Holland; Jonnesco, for Roumania; Williaminoff, for Russia; Reverdin, for Switzerland, and Borelius, for Sweden. It is proposed to have an annual meeting of the new association.

**The Belgian Congress of Surgery.**—Fractures, appendicitis and surgical antisepsis and asepsis were the subjects discussed at this congress, which met at Brussels, September 8 to

10. Tuffier's address was a plea for operative intervention under radiography and asepsis for fractures of the long bones. Valraven's address on surgical antisepsis and asepsis was an interesting presentation of the practices in vogue at various clinics as learned by direct inquiry of the surgeons. About 25 different processes of sterilizing catgut were advocated by the 58 surgeons who expressed their preference for catgut; 50 who use it occasionally are satisfied with the manufacturer's disinfection. Jonnesco puts a flannel suit on the patient that extends closed beyond hands and feet; Reverdin uses a similar suit of cotton. Dry asepsis seems to be the rule where possible. Drainage is rejected completely by a large number; 74 use rubber drains; 27 Mikulicz's drains, and 13 glass tubes. Giordano and Berger apply a large dressing, extending far beyond the wound, while Roux prefers a minimal collodion dressing. Hannecart and Jacobs absolutely decline all infectious cases; Terrier, Korteweg, Bataille and Delagénière never touch a suppurating case nor even the dressings, always using the forceps. Schwartz and Mouchet take a general bath after operating on a suppurating case. Adenot emphasizes the advantage of copious sweating in the disinfection of the hands, and Letoux states that he dips his hands in ink and lets them dry as a test of the thoroughness of his disinfection afterward. The stain shows the parts overlooked in the cleansing, the particles of ink settling in the crevices like microbes. Out of 120 replies received, 94 surgeons state that they have given up the use of gloves, except perhaps rubber gloves during septic operations, but Von Eiselsberg, Tuffier and Gerster use lisle gloves for all operations and change them often. The mask is rejected by 95 surgeons, others advocating it. Rydygier and Bassini moisten face and mustache with an antiseptic solution before operating. Haegler always rinses his mouth with 50 per cent. alcohol. Some surgeons wear a waterproof apron under their blouse. Jacobs advises stripping to the skin and putting on a complete washable suit fresh from the autoclave before each important operation. Cordemans retains only his trousers under his blouse. Verhoef changes his linen before every important operation. The general trend of opinion seems to be to change the dressings as little as possible and then to handle them only with the forceps. Jonnesco has the dressings changed only in a special aseptic room, not in the ward, and a number of surgeons have a special room for preliminary disinfection. Sorel warns against the use of antiseptics which entail desquamation. Goris paints the region around the field with iodin the day before and the day of the operation. If the umbilicus is near the field, Van Stockum fills up the depression with collodion.

## OBSTETRICAL SOCIETY OF PHILADELPHIA.

*Regular Meeting, held Sept. 4, 1902.*

The President, Dr. John M. Fisher, in the Chair.

A case of endothelioma of the uterus was described by Dr. Linnæus H. Prince. This rare affection has been reported four times.

### A Report of 100 Obstetrical Cases.

DR. EDWIN ROSENTHAL, in this paper, wished to show the average run of such cases in private practice. He placed peculiar emphasis on the nationality of the patient as being a factor in the character of labor. Of the 100 children 17 were lost. The majority of presentations were by the head; it was necessary to use the forceps 15 times. Of the instrumental deliveries 12 were males and 3 were females; thus, for every female child needing forceps delivery, 4 male children had to be so delivered. Regarding the use of forceps, a rule of the author, which he considers sufficiently elastic to suit most cases, is as follows: Any case suitable for the use of forceps should have them applied if after three hours no progress is made toward the delivery of the child. The author considered as suitable forceps cases those that can possibly be delivered with the aid of the instrument, such as occipital anterior position, right and left. The occipital posterior position, right or left, he believes always to be a debatable position, and the use of forceps should not be considered as the only method to pursue. Many of the latter positions are believed to be impossible forceps cases, and the question of podalic version or of section should always be considered. The speaker advocated the use of douches only when there is infection, and then for special purposes.

In conclusion, the necessity was emphasized of considering obstetrics as a surgical procedure, and therefore all the rules of hygiene and cleanliness should be the fundamental principle in its practice.

DISCUSSION.

DR. JOHN C. DACOSTA—My experience with left occipital posterior position has been, that it has generally been easily converted into anterior, particularly if the forceps or one blade as a vectis is used. The most of my cases have been American women, and in these we know that the heads of the babies have been larger than those of foreigners.

I was glad to hear the Doctor speak of the disuse of douches. A long while ago I satisfied myself that douches, unless for some purulent or similar discharge, should not be used. My belief was confirmed by an article in a German paper, describing experiments in which streptococci had been implanted in vaginæ without sterilization. The streptococci were killed within an hour. The vaginæ were then sterilized and the streptococci again implanted, when it took 24 hours to kill them. This I thought was a strong argument against the douche.

I think the Doctor is rather free in the administration of ether in obstetric work. I would like to ask him what proportion of hemorrhage he has had in cases in which he has used ether. I have seen very serious results from its use. I think that Nature intended woman should have a certain amount of pain to help expulsion. We know that ether affects if it does not entirely relax the muscular tissue, and we do not want this to happen, nor to have hemorrhage.

DR. M. M. FRANKLIN—I wish to congratulate Dr. Rosenthal on his paper. I think the infant mortality mentioned is rather high, which is perhaps due to the foreign nationality of his patients. As an anesthetic I have never used anything but ether, and have never noticed any bad results. In some of my cases postpartum hemorrhages have occurred, but I think this would have happened no matter what anesthetic was used.

Every case of occipito-posterior presentation I have been able to deliver without section or craniotomy. Perhaps this has been due to good fortune rather than to skill, but I think with Dr. DeCosta that with patience and the use of forceps we can secure the anterior position, or deliver as a posterior presentation with, of course, more or less laceration of the maternal structures.

DR. J. M. WEST—I do not altogether agree with the author concerning anesthetics. I am partial to the use of chloroform and use it almost invariably. If given carefully I believe it is the safest anesthetic we have in obstetric practice.

The question of posterior rotation of the occiput is extremely interesting, and one not always easy to settle in the best manner. I have never met with a case of rotation of the occiput posteriorly in which delivery could not be made safely by means of the forceps.

DR. ROSENTHAL, in closing—In cases in which the promontory of the sacrum is a little too large, and the head is firmly fixed in the fourth position, a Cesarean section should be done. The use of the obstetric forceps in such cases should always be a debatable question. In the exceptional cases in which the uterus has been drained of its liquid contents and the head is in a posterior right or left position, I believe that if the child is alive a section is a right procedure, giving greater hope to both child and mother than a forcible instrumental delivery. But if the child be dead, then craniotomy is justifiable. If the instruments be applied in this position, and the pelvis be large enough or the head of the child small enough to be forced through, delivery can be accomplished; but at what a cost! Invariably the perineum is torn and other and greater harm may be inflicted. An anesthetic should be employed when we apply the instruments.

I know that hemorrhages sometimes follow ether, but there is some other cause than the ether. I think that postpartum hemorrhages are generally due to something left behind, though, of course, ether may sometimes produce them. I should make it a rule of practice in all cases of hemorrhages of this character to first look for the cause and then treat it. I believe we ought to use an anesthetic in all obstetric operations, but I most certainly believe it is wrong to increase our obstetrical practice by the employment of anesthetics.

## SECOND INTERNATIONAL CONFERENCE FOR THE PREVENTION OF SYPHILIS AND VENEREAL DISEASES.

*Held at Brussels, Belgium, Sept. 1 to 6, 1902.*

(From Our Special European Correspondent.)

*(Concluded from page 857.)*

### Arm-to-Arm Vaccination.

A spirited discussion took place regarding arm-to-arm vaccination, but it was generally conceded that animal lymph was advisable. If the state prohibited arm-to-arm vaccination, as a means of control of one of the smaller factors in the spread of syphilis, then the state should provide the necessary vaccine lymph.

### Industrial Infections.

Dr. Landouzy, Paris, advocated the passage of legal measures which would recognize, as punishable, all cases of syphilis acquired by workers in industrial manufacture. The responsibility should fall on the proprietor, whose duty it should be to insist that none of his employes had the disease, or the state should have the power to inspect and enforce a healthy condition of employes when large numbers of workers are collected.

### Discussion of Resolutions.

The afternoon session was devoted to the discussion of certain fixed resolutions. The greatest amount of spirit was shown in the discussion of two resolutions, one by Dr. Landouzy and the other by Dr. Neisser. The former advocated in general the abandonment of all restricted measures regarding the prostitute, and the enforcement of common laws which should settle the responsibility of communicating disease on the diseased individuals. This resolution met with the approval of a large number of the abolitionists, although it was very evident that no sound principles of modern law were in the minds of those in favor of the measure.

Dr. Neisser's proposition met with greater favor. He said that the state had the right to protect its citizens and should establish a system of sanitary control, which was a transformation of the present systems. This should not be obligatory for all, but only in so far as hygienic purposes were concerned. The majority of the members of the Congress favored this, but no unanimous conclusion could be reached. Other questions and resolutions will be presented at the end of this report.

### Legal Responsibility for Transmitting Venereal Diseases.

This subject was discussed with considerable vigor by eminent jurists on the fourth day. The opinions were very various, for, while in theory the objects to be obtained were admitted by all, it was shown by those of widest experience that all measures would prove absolutely impracticable, save for isolated and flagrant cases.

Mr. Bonnvie, of the Supreme Court of Brussels, gave a most interesting contribution to the discussion. He said that from a standpoint of jurisprudence the transmission of syphilis insantium and of syphilis were two entirely different things; the one being acquired by an innocent person through the dereliction of another, the other a matter of wilful exposure to a known or unknown danger. The law should frame measures to protect the former, but it could not recognize an immoral contract as in the case of the latter, save in the event of violence or theft. The law, if invoked, should be so, not because an individual by infecting another has done wrong to that individual, but because he has wronged society as represented by the tort suffered by one of its members.

From a practical point of view, however, when such cases are taken into the civil courts, all sorts of technical difficulties, questions for medical experts, etc., arise, and as a result the small hope of obtaining damages on the one hand and the dangers of blackmail on the other make the question extremely difficult excepting in the most flagrant instances. Prostitution is not recognized by law; it can not be, and those who pursue that avocation must know its dangers. Misery and crime are largely responsible for the evil of prostitution. Remove these and this evil will largely disappear. He quoted Fournier as saying that one-fifth of all women were infected by their husbands. How can this terrible condition be remedied? By divorce? But how will this right the wrong? It will not remove syphilis from the wife, and then comes the scandal-producing process of proving the husband guilty. The women should be given a better opportunity and divorce might prove, in the hands of the man, a destructive weapon. The man with syphilis who insists on marrying because of pecuniary or social advantages should be considered by the physician as outside the ordinary moral plane. He is a criminal and his secret should not be harbored.

The dangers of venereal disease should be taken into account in all contracts for marriage, as any other defaulting factor is recognized in business contracts.

Jurists LeFoyer and Bell of Paris maintained that an infecting individual should be punished by law. His fault is a tort committed on another and should be recognized in the legal code.

D. Jadassohn, Berne, said that new laws had recently been made in Switzerland which make it a misdemeanor for a prostitute to continue her calling after a physician has notified her she has an infectious disease.

Dr. Tomasoli, professor in the University of Palermo, said that the prostitute should be legally recognized because of her intimate association with the criminal. The state control of prostitution is a legal necessity as a protection to the community.

### Individual Prophylaxis.

The factors concerned in individual prophylaxis are well recognized by all and hence the discussions on this point were not extended.

Dr. Good, Paris, spoke of talks and lectures as being unsatisfactory save in hospitals or garrisons where discipline was obtainable. Placards and signs were of limited use because of the difficulties of including instruction for both sexes. Wisely written pamphlets and books, carefully distributed, were the best means of giving knowledge which was at the basis of individual prophylaxis.

Dr. Queyrat asked for the assistance of the clergy to take off the ban of secrecy concerning the discussion of sexual questions. By their efforts a more healthy tone could be induced.

M. DeMorsier advocated more biologic teaching in elementary schools, whereby the phenomena of sex will be approached rationally and impersonally and the youth will have learned from plants and lower animals the principles of reproduction.

Dr. Santoliquido urged the principle of gratuitous medical treatment as important for individual prophylaxis. In the Italian dispensaries the names of the patients are not asked and the bottles are labeled so that no suspicion will be directed to the sick person. The government spends about $200,000 a year to provide instruction in elementary sexual hygiene.

Dr. Neisser believed in the open dispensary, but thought that it should be for those only who could not afford to pay.

Other members voiced similar and other well-recognized features concerning the intellectual and moral instruction of the youth of the country.

### Statistics.

Because of the technical character of the subject, this subject was but scantily noticed, being referred by Dr. Neisser to a committee. Uniformity and regularity were the attributes most desirable in order to afford comparable figures.

### Recommendations of the Congress.

A number of important resolutions were not recommended to the Congress because of lack of unanimous vote, but a few minor points were presented as the vote of all. In brief, these were:

1. All recruits should be carefully instructed by an official pamphlet on the risks, dangers, etc., of venereal diseases. This pamphlet he must keep as a part of his official papers.

2. The law should guarantee free treatment to all venereal patients and should break down all restriction against the treatment of these diseases in public hospitals. Medical secrecy and modesty should be respected.

3. Moral influences should be furthered and it should be taught that chastity and continence are not only compatible with perfect health, but are highly desirable.

4. Statistical inquiries should have a uniform basis, should be international in character and should receive government supervision.

5. All institutions for the instruction of the young should introduce courses in the relative matters of sexual hygiene from a moral and broad point of view and there should be editorial conformity in the books and pamphlets which are issued for this purpose.

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## MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

*Fifty-Second Annual Meeting, held at Allentown, Sept. 16 to 18, 1902.*

The President, Dr. F. P. Ball, Lock Haven, in the Chair.

*(Concluded from page 858.)*

### Hydrotherapy in Diseases of the Heart.

DR. SOLOMON SOLIS COHEN, Philadelphia, spoke on the relief and the cure of some cases of disease of the heart by means of application of water and of the variations of temperature that can be produced by these applications and which could be carried out by any physician in his own household. It was not necessary to send patients across the water to a particular spa, or to buy elaborate apparatus. A few feet of rubber tubing, a rubber bag, a bathtub or spigot or hose were all the apparatus necessary. With these means it was possible to diminish or retard the rate of the cardiac contractions, increase or diminish the vigor of the cardiac action. The majority of physicians were not aware that the application of Leiter's coil over the heart or the application of the ice pack is the best preventative possible of the cardiac weakness of infectious disease. Even when cardiac weakness has developed the application of cold over the pericardium is less dangerous than large doses of alcohol.

DR. COHEN, in closing the discussion: Although it seemed rather paradoxical to speak of the internal use of water to relieve dropsy, yet in certain cases it would be found that by restricting the time of water drinking and allowing the patient to satisfy himself at intervals of four hours there would be a decided effect in increasing the urine and diminishing anasarca. The patient is allowed no fluid of any kind in the interval. The use of hypodermoclysis given very slowly will sometimes start the kidney sufficiently to carry off the anasarca. If a large quantity is introduced rapidly under the skin the result is immediate edema of the lungs and death of patient.

### The Unity and Intercommunicability of Human and Bovine Tuberculosis.

DR. MAZYCK P. RAVENEL, Philadelphia, showed the proof of the unity of human and bovine tuberculosis. 1. In the study of pure cultures from man and bovine animals. While certain differences may be ordinarily recognized they are due to the soil in which they have grown, and the resistance they have encountered. Cultures on artificial media lose their distinctive features gradually, and become so much alike that it is difficult to tell them apart. 2. In the action on animals, cultures from both sources produce essentially the same disease in all experimental animals. The chief difference noted is that cultures from bovine sources have a much greater pathogenic power. 3. The gross pathology of the lesions produced is essentially the same, such differences as are seen being due to the resistance of the animal rather than to any difference in the cultures. 4. The pathologic histology of the lesions is the same as shown by Schuppel, Baumgarten and others. Though this proof of unity presupposes intercommunicability the following further proofs are submitted: 1. Infection from man to animals. (*a*) By sputum from attendants, as in the cases reported by Cozette, Cliquet, Huon, etc. (*b*) By inoculation, as shown by Chauveau, Klebs, Crookshank, and others. 2. Infection from animals to man. (*a*) By inoculation, as in many reported cases. (*b*) By food, cases of which have also been reported. The author states that the two diseases are the same, caused by the same germ and are intercommunicable. Tuberculosis of cattle is therefore a menace to public health and every effort should be made to suppress and eradicate it. At the same time the greatest danger is in tubercular sputum from man. The efforts for the prevention of tuberculosis should embrace all sources of infection.

### Food Adulteration.

On Wednesday evening Secretary Hamilton of the Department of Agriculture at Harrisburg delivered an address on "Food Adulteration; Its Extent and Control." The condition of food products on the markets in the state was shown by figures giving facts as disclosed by the work of the Dairy and Food Division of the Department of Agriculture for two and a half years. Of 3023 samples of butter, all were sold as butter except 103 sold as oleomargarine, and 61 sold as butterine. The analyses show that 1019 were butter, 164 renovated butter, and 1840 oleomargarine. An elaborate table is given showing samples of food analyzed under the provisions of the Pure Food Act of June 26, 1895. The responsibility for food adulteration is fixed on the manufacturer, the jobber, the retailer and the cook, and under the latter head is included the proprietor employing the cook. The careless methods used in the keeping of food are criticized. The keeping of milk in open vessels exposed to germs is common. It is suggested that if each physician in Pennsylvania would urge greater care in the preparation and preservation of food in the families of his patients the number of many troubles would be reduced and the length of life, its enjoyment and the efficiency of workers would be largely increased. The laws governing food adulteration as it affects the manufacturer, etc., should be both state and national. Heretofore this legislation has been confined to the several states, but the opinion is unanimous that a national pure food law is a necessity. The purposes of such a national law are given by the author and the statement is made that a law embodying these points has been prepared, and has the endorsement of the National Association of Dairy and Food Commissioners to be presented before Congress at its next meeting. The opinion is expressed that the movement should be given the active support of all the medical associations in the United States, and that the members of these associations should urge on their members of Congress the importance of its speedy passage. The suggestion is made that the society appoint a committee of its most experienced members to take up the matter of the effects of the various substances now employed for the preservation and adulteration of foods and report their conclusions at the meeting in 1903.

### Infant Feeding.

DR. ADELAIDE M. UNDERWOOD stated that if the mother were normal, in body and mind, the infant's food should be the mother's milk. Indigestion in mother or babe should be treated by hygienic means rather than by medicine. Since food is not alone alimentary all details of healthful environment should receive minute attention. The average factory-prepared food is not to be considered by intelligent, scientific physicians. A reliable dairy must be recommended. The artificially-fed baby should in no case be left without the mother being taught the careful weighings, the study of the bowel dejections, and that deviations in these to be promptly reported. The baths of the baby, the clothing, and time to be spent in the open air are given consideration.

### Address in Surgery.

DR. GEORGE D. NUTT, Williamsport, called attention to the growing interest and importance in surgical work and stated that too much is written for self-laudation rather than for scientific value. Instead of surgery having reached the acme of its power, the author believes it just on the threshold with a future bright with large possibilities.

### Uniform Constitution for County Societies.

The constitution and by-laws proposed by the special committee were adopted as a standard or model for county societies and are to be referred to the local societies for adoption.

The president appointed a committee of five to consider the question of food adulteration; the use and abuse of the so-

called preservatives and the coloring of food, and the effect of these adulterations on the health of the people. This committee is to investigate and report at the next annual meeting, and the officers of the Department of Agriculture of the State of Pennsylvania will be asked to co-operate.

## Therapeutics.

[It is the aim of this department to aid the general practitioner by giving practical prescriptions and, in brief, methods of treatment for the diseases seen especially in every-day practice. Proper inquiries concerning general formulae and outlines of treatment are answered in these columns without allusion to inquirer.]

### Pertussis.

Monti, according to an abstract in *Amer. Med.*, recommends the following in the treatment of whooping cough: 1. Place the child in a well-lighted and well-ventilated room, the temperature of which should be kept down to 68 F. The removal of the small patients to a temperate climate during the winter is excellent. Avoid variations in winter. 2. Inhalations of boric acid and sodium salicylate.

The following are recommended by Birchfield:

℞. Acidi carbol. ..... gtt. xxx 2
Menthol (pure) ..... gr. xv 1
Aq. destil. ..... ʒvi 180

M. Sig.: Six drams should be inhaled daily by means of an inhaler.

The internal treatment is as follows:

℞. Pulv. beliadonnæ ..... gr. iss | 09
Sodii bicarb.
Sacchari albi, āā ..... gr. xxii 1 | 50

M. Sig.: To be taken one to three times daily in a capsule.

[The dose of belladonna in the foregoing prescription is rather large.]

The following combination containing bromoform is recommended by Marfan:

℞. Bromoformi ..... gtt. xlvii 3 | 00
Olei amygdalæ dulcis ..... ʒiv 16

This is to be shaken thoroughly and added to:

Acaciæ ..... ʒiv 16
Aq. laurocerasi ..... ʒi 4
Aq. destil. ..... ʒiv 120

M. Sig.: One teaspoonful three or four times daily.

Quinin is also recommended internally as follows:

℞. Quininæ tannatis
Sodii bicarb.
Sacchari albi, āā ..... gr. xv 1

M. Ft. Chartulæ No. vi. Sig.: One every two hours.

### Rectal Gonorrhea.

In an article in the *Cin. Lancet-Clinic*, the treatment of gonorrhea of the rectum is carried out in very much the same way as gonorrhea of the penis or vagina. In the first place calomel is recommended in order to reduce the inflammation and to relieve the congestion in the hemorrhoidal veins. The following is recommended as an antiseptic in the form of an enema:

℞. Sol. acidi boracici (sat.) ..... ʒi 30
Aquæ ..... Oi 480

M. Sig.: Use as a rectal injection.

When this solution is expelled the following is introduced:

℞. Nargol ..... gr. x | 65
Aq. destil. ..... ʒi 30

M. Sig.: To be injected twice daily.

The author recommends that the anus be bathed morning and evening with hydrogen peroxid, followed by a solution of hydrastis canadensis, one teaspoonful to half a pint of water. The following ointment is then applied on lint:

℞. Hydrarg. chloridi mitis ..... ʒi 4
Ichthyol ..... ʒi 4
Lanolini ..... ʒi 30

M. Sig.: Apply externally on lint and fasten with a bandage.

It takes, according to the author, from three to ten weeks to effect a cure by this treatment.

The patients should be placed on tonic treatment, such as syrup of hypophosphites, combined with tincture of gentian, cinchona, nux vomica and taraxacum.

### Use of Salicylates in Children.

The following formulæ from Gillet are quoted by *Med. Standard*, in prescribing salicylates for children:

℞. Sodii salicylatis ..... gr. viiss | 50
Syr. aurantii flor.
Aq. destil., āā ..... ʒi 30 |

M. Sig.: One teaspoonful every hour in a little milk.

The amount of sodium salicylate in the foregoing prescription can be varied according to the age. When a mixture can not be administered, suppositories may be used:

℞. Sodii salicylatis ..... gr. viiss | 50
Olei theobromæ ..... ʒi 4 |

M. Ft. suppos. No. iv. Sig.: To be used at equal intervals in the twenty-four hours.

Another formula may be used as a local application to the joints:

℞. Methyl salicylatis ..... gr. xv 1 |
Menthol ..... gr. iii | 20
Petrolati ..... ʒi 30 |

M. Sig.: Apply locally around the joints, the whole being covered with cotton wool and waxed taffeta; or:

℞. Acidi salicylici ..... ʒiiss 10 |
Spts. terebenthinæ ..... ʒiiss 10 |
Lanolini ..... ʒiii 12 |
Adipis ..... ʒiiss 75 |

M. Sig.: To be applied locally to the affected joints.

### Treatment of Premature Baldness.

Lassar, in the *Indian Med. Record*, states that he has observed from experiments on animals that this disease is contagious, and occurs independent of any general affection or state of health of the patient. He recommends the following method of treatment: The scalp is to be washed every day with tar soap or soft glycerin soap or with soap containing sodium iodid, the soap is to be thoroughly applied and rubbed into the scalp for fifteen minutes. Following this a warm douche is used; then after the application of a corrosive sublimate solution—1 to 500—the hair is dried and 0.5 per cent. of a spirit solution of naphthalin is rubbed into the affected parts. Carbolic acid or salicylic acid may also be employed. If this treatment be adopted in the early stages, when the hair is just beginning to fall, it usually proves successful, but it must be kept up for eight weeks or more. The fact that this disease is due to a communicable morbid principle suggests that it may be conveyed by the comb and brush of the barber.

### La Grippe.

The pulmonary forms of la grippe sometimes become very stubborn to treatment. The following is recommended by *La Med. Moderne:*

℞. Pulv. terpin ..... gr. iv | 25
Sodii benzoatis |
Benzonaphthol, āā ..... gr. iii | 20
Sparteinæ sulph ..... gr. ss | 03
Quininæ hydrochlor. ..... gr. iiss | 15

M. Ft. Cachet No. i. Sig.: One such cachet to be taken four times daily; or:

℞. Pulv. terpin ..... gr. iv | 25
Sodii benzoatis ..... gr. iii | 20
Potassii iodidi ..... gr. iss | 09
Benzonaphthol ..... gr. iii | 20
Quin. hydrochlor. ..... gr. iiss | 15
Pulv. nucis vom. ..... gr. ¼ | 015
Sparteinæ sulph. ..... gr. ss | 03
Ergotin ..... gtt. v | 30

M. Ft. Cachet No. i. Sig.: One such four times daily.

The following is recommended to control the cough:

℞. Pot. bromidi ..... gr. iii | 20
Codeinæ ..... gr. 1/6 | 01
Antipyrini ..... gr. ivss | 25
Morph. hydrochlor. ..... gr. ⅛ | 0075

M. Ft. capsula No. i. Sig.: One such to be taken two or three times a day.

To ameliorate the catarrh symptoms the following combination is also recommended:

| | | | |
|---|---|---|---|
| ℞. | Pulv. ext. belladonnæ | gr. iv | 25 |
| | Codeinæ | gr. iv | 25 |
| | Pulv. capsici | gr. iv | 25 |
| | Euquininæ | 3i | 4 |
| | Acetanilidi | 3i | 4 |

M. Ft. chart. No. xx. Sig.: One powder every three or four hours; or:

| | | | |
|---|---|---|---|
| ℞. | Quininæ salicylatis | gr. xxxvi | 2\|35 |
| | Acetanilidi | gr. xxiv | 1\|65 |
| | Pulv. camphoræ | gr. iv | 25 |
| | Pulv. capsici | gr. ii | 12 |
| | Pulv. ext. belladonnæ | gr. ii | 12 |

M. Ft. capsulæ No. xii. Sig.: One every three hours if necessary.

### Eggs in Therapeutics.

L. Normand, as noted by the *N. Y. Med. Jour.*, gives the following formulæ in which eggs may be used therapeutically: The most common preparation known as "chicken's milk" is made as follows:

| | | | |
|---|---|---|---|
| ℞. | Yolk of one egg. | | |
| | Hot water | ℥vi | 180 |
| | Sugar | 3v | 20 |

M. and flavor with two teaspoonfuls of orange flower water.

RESTORATIVE PREPARATIONS.

| | | | |
|---|---|---|---|
| ℞. | Cream | ℥vi | 180 |
| | Yolk of two eggs. | | |
| | Sugar | 3vii | 28 |
| | Aquæ cinnamoni | 3xi | 44 |

Misce.

Guibort's formula for "syrup of eggs" is as follows:

| | | | |
|---|---|---|---|
| ℞. | Eggs | x | |
| | Aquæ | 3x | 40 |

Beat up and mix with:

| | | | |
|---|---|---|---|
| | Sodii chloridium | ℥ss | 15 |
| | Aq. aurantii flor. | 3vi | 24 |
| | Sacchari | ℥ix | 270 |

A RESTORATIVE TEA.

| | | | |
|---|---|---|---|
| ℞. | Yolks of three eggs. | | |
| | Cloves | 3xiv | 56 |
| | Sugar | gr. xxx | 2 |
| | Water | 3viii | 32 |
| | Brandy | ℥xxiii | 690 |

M. Sig.: Serve as a drink.

## Medicolegal.

### SOME LEGISLATION OF THE YEAR 1902.

**United States—Public Health Service.**—Chapter 1370 of the Public Acts of the Fifty-seventh Congress, which provides that the United States Marine-Hospital Service shall hereafter be designated the Public Health and Marine-Hospital Service of the United States, provides, among other things, that there shall be an advisory board for the hygienic laboratory provided by the Act of Congress approved March 3, 1901, for consultation with the surgeon-general of the Public Health and Marine-Hospital Service relative to the investigations to be inaugurated, and the methods of conducting the same, in said laboratory. That there shall be appointed by the surgeon-general, with the approval of the Secretary of the Treasury, whenever, in the opinion of the surgeon-general, commissioned medical officers of the Public Health and Marine-Hospital Service are not available for this duty by detail, competent persons to take charge of the divisions, respectively, of chemistry, zoology and pharmacology of the hygienic laboratory. Provided, that all commissioned officers of the Public Health and Marine-Hospital Service not below the grade of passed assistant-surgeon shall be eligible to assignment to duty in charge of the said divisions of the hygienic laboratory, and while serving in such capacity shall be entitled to the pay and emoluments of their rank. That when, in the opinion of the surgeon-general, the interests of the public health would be promoted by a conference of said service with state or territorial boards of health, quarantine authorities, or state health officers, the District of Columbia included, he may invite as many of said health and quarantine authorities as he deems necessary or proper to send delegates, not more than one from each State or Territory and District of Columbia, to said conference: Provided, that an annual conference of the health authorities of all the states and territories and the District of Columbia shall be called, each of said states, territories and the District of Columbia to be entitled to one delegate: And provided further, that it shall be the duty of the surgeon-general to call a conference on the application of not less than five state or territorial boards of health quarantine authorities, or state health officers, each of said states and territories joining in such request to be represented by one delegate. That to secure uniformity in the registration of mortality, morbidity, and vital statistics it shall be the duty of the surgeon-general, after the annual conference required as above to be called, to prepare and distribute suitable and necessary forms for the collection and compilation of such statistics, and said statistics, when transmitted to the Public Health and Marine-Hospital Bureau on said forms, shall be compiled and published by the Public Health and Marine-Hospital Service as a part of the health reports published by said service. That the President shall from time to time prescribe rules for the conduct of the Public Health and Marine-Hospital Service. He shall also prescribe regulations respecting its internal administration and discipline, and the uniforms of its officers and employes.

**New York—For Furtherance of Investigations.**—In Chapter 594 of the Laws of New York of 1902, making appropriations for various purposes, there is appropriated to the department of health for necessary expenditures for the manufacture and standardization of tetanus, streptococcus and diphtheria antitoxin and for further investigations of serum-therapy in tuberculosis, typhoid fever and kindred diseases, the sum of $14,000 or so much thereof as may be necessary, such expenditure to be made on the approval of the governor, and available, October 1, 1902, for the ensuing fiscal year. For the department of health for equipment and maintenance of the cancer laboratory at Buffalo, for investigation into the cause, nature, mortality rate and treatment of the cancer, and the salaries of officials of the same, $15,000. The moneys herein appropriated to be paid from vouchers officially verified by the director of said laboratory, and approved by the state commissioner of health.

**Virginia—Prohibition on Infected Persons.**—Chapter 421 of the Laws of Virginia of 1902 provides, under penalty, that it shall be unlawful for any person who knows himself to be infected with any dangerous, contagious, or infectious disease, or who has recently had such disease, and has not cleansed his person and clothes so as to be free from the infection: First, to go into the company of any one who is liable to take the infection without warning such person of his being so infected. Second, to go into any church or other house used for public worship or for school purposes, or to go into any mine, mill, factory, shop, store, warehouse, depot, train, ship, hotel, restaurant or dwelling belonging to any other person, or to go into any courthouse, jail, asylum or almshouse, or to go into any like house, place or building. Third, that it shall be unlawful for any person who has been voluntarily exposed to smallpox or any other dangerous, contagious, or infectious disease to come into this state, or to go from place to place therein, within a period of fifteen days from such exposure, unless such person shall have a certificate from a competent and reputable practicing physician stating that no danger of communication of disease by such exposed person exists. When the State Board of Health or the county or city boards of health have established quarantine lines or ordered compulsory vaccination in any infected boundary, it shall be unlawful for any person to violate either of said regulations, or to aid or encourage another to violate either. But this act shall not apply to practicing physicians or undertakers when in the discharge of the duties of their respective professions or callings.

**District of Columbia—To Promote Anatomic Science.**—Chapter 638 of the Public Acts of the Fifty-seventh Congress

creates what is to be known as the Anatomical Board of the District of Columbia. It is to consist of the health officer of the District and two representatives from each of the schools in the district conferring the degree of doctor of medicine or doctor of dental surgery; the Post-Graduate School of Medicine, and the medical schools of the United States Army and Navy. Every public officer, agent and servant, and every officer, agent and servant of any almshouse, prison, jail, asylum, morgue, hospital and other public institutions and offices having charge or control of dead human bodies requiring to be buried at public expense, shall notify the board, or such person as may be designated by it, whenever any dead human body comes into his possession, charge or control for burial at public expense. And every such officer shall, on application by the board or its agent, without fee or reward, and complying with the laws and regulations governing the removal of dead human bodies in the District of Columbia, deliver every such body to said board. Exceptions to this are where the deceased person, during his last illness, without suggestion or solicitation, requests to be buried or cremated, or relatives within a limited time claim the body or ask that it be buried, or a friend provides for its proper burial or cremation, or the deceased was a traveler who died suddenly. The bodies so received by it the board is to distribute among and to the above schools; the medical examining boards of the United States Army, Navy, and Marine-Hospital Service; and the Board of Medical Supervisors of the District of Columbia, on written request therefor, each such school and board to receive annually, as nearly as may be practicable, such proportion of the entire number of bodies distributed as the number of students enrolled and in regular attendance at such school, and the number of candidates appearing for examination before such board, respectively, engaged bona fide at such school, or examined by said school, or examined by said board in dissecting, and operative surgery on the cadaver, bears to the total number of students so enrolled in attendance, and engaged, and of persons so examined, in the District of Columbia. The schools, except those of the Army and Navy, must each give a bond in the penal sum of $200, conditioned that all bodies which it shall receive shall be used in the district and only for the promotion of the science and art of medicine and of dentistry.

**District of Columbia—Reporting of Typhoid Fever.**—Chapter 7 of the Public Acts of the Fifty-seventh Congress provides that every physician attending or called in to visit or examine any case of typhoid fever in the District of Columbia shall at once send to the health officer of said District a certificate, in ink, signed by him, stating the name of the disease, and the name, age, sex and color of the person suffering therefrom, and setting forth by street and number or otherwise sufficiently designating the house, room or other place in which said person can be found, together with such other reasonable information relating thereto as may be required by said health officer; and on the recovery or death of such patient the physician in attendance shall, within twenty-four hours after he becomes aware of such recovery or death, forward to said health officer a similar certificate certifying thereto.

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# Current Medical Literature.

## AMERICAN.

Titles marked with an asterisk (*) are abstracted below.

### Medical Record (N. Y.), September 27.

1 *Rational or Dietetic Treatment of "Bright's Disease" Contrasted with Surgical Intervention. William H. Porter.
2 *Tuberculosis of the Urinary Tract. P. Newmark.
3 Is It Wise for the Regular Practicing Physician to Spend Time to Investigate Psychic Therapeutics? R. Osgood Mason.
4 *Clinical Study of a New Silver Salt in the Treatment of Gonorrhea. H. M. Christian.
5 Pulse and Respiration at an Elevation of 10,200 Feet, as Ascertained by the Examination of 100 Subjects. Maurice Kahn.

### Medical News (N. Y.), September 27.

6 *Myomectomy vs. Hysterectomy. Andrew McCosh.
7 *The Relative Advantages of the Complete and Partial Hysterectomy. E. E. Montgomery.
8 Wounds, with a Discussion of What Constitutes Rational Treatment. Frederic Griffith.
9 *The Importance of Diagnosis in Skin Diseases Considered Generally and as Applied to Particular Diseases. Isadore Dyer.
10 Advances in Ophthalmic Therapeutics. D. B. St. John Roosa.
11 *Bronchial Asthma and Allied Disorders; Their Summer Treatment. Beverley Robinson.
12 School Life and Insanity. J. S. Lankford.

### Boston Medical and Surgical Journal, September 25.

13 *The Creation of an Artificial Valvular Fistula: (*a*) for the Treatment of Chronic Colitis; (*b*) As an Adjuvant to Certain Operations on the Stomach. C. L. Gibson.
14 *The Iliopsoas Bursa: Its Surgical Importance and the Treatment of Its Inflammatory Conditions, with Report of Three Cases. F. B. Lund.
15 *Operative Treatment of Varicose Veins. J. B. Blake.
16 *The Local Pathology of Acute General Infections Arising Through the Lymphoid Tissue of the Fauces. J. L. Goodale.

### American Medicine (Philadelphia), September 27.

17 *Some Observations in Regard to Smallpox. Frederick H. Dillingham.
18 *Types of Infection Produced in Man by Intermediate Members of the Typhoid-colon Group of Bacilli. Warren Coleman.
19 Clinical Report upon Ureteral Surgery. Charles P. Noble.
20 *The Prophylaxis of Venereal Disease. John C. Spencer.
21 Relaxation of the Synchondrosis of the Symphysis Pubis, Following Normal Labor, Treated by Resection and Wiring. B. R. Schenck.
22 *School Vaccinations. William R. Fisher.
23 The Hospitals of Jerusalem. Nicholas Senn.
24 Medical Education. Charles W. Richardson.

### Philadelphia Medical Journal, September 27.

25 *Chauvinism in Medicine. William Osler.
26 *An Additional Case of Tumor of the Brain, Localized Clinically and by the Roentgen Rays. Charles K. Mills; Roentgen Ray Investigation. G. E. Pfahler; Operation. J. B. Deaver.
27 Leucocytosis in Lead-Workers. L. Napoleon Boston.
28 On the Dosage in Radiotherapy. George G. Hopkins.

### New York Medical Journal, September 27.

29 *Perforating Ulcers of the Duodenum. (Concluded.) John B. Murphy.
30 *Placenta Previa; Its Early Recognition and Treatment. Edward A. Ayers.
31 Complications in the Passage of a Gallstone. (To be concluded.) Neil Macphatter.
32 Pain as a Symptom in Gynecologic Disease. Samuel M. Brickner.
33 The Treatment of Yellow Fever. J. Hobart Egbert.

### St. Louis Medical Review, September 27.

34 Sarcoma of Testicle and Kidney with Presentation of Specimen of the Former. Henry Jacobson.
35 A New Electric Centrifuge. Joseph L. Boehm.

### Cincinnati Lancet-Clinic, September 27.

36 *The Obstetrical Aspects of Idiocy. William Gillespie.
37 *Indications for the Use of the Stomach-Tube. Henry W. Bettmann.
38 An Easy Perineorrhaphy. W. V. Watson.

### American Practitioner and News (Louisville), August 15.

39 Medical Treatment of Cholelithiasis. R. Alexander Bate.
40 *Surgical Treatment of Cholelithiasis. David Barrow.
41 The Medical Management of Appendicitis. J. W. Irwin.
42 *Treatment of Fractures and Dislocations in Relation to Suits for Malpractice. John A. Lewis.
43 Nasal Obstructions. Dudley S. Reynolds.

### Medical Fortnightly (St. Louis), September 10.

44 Focal Facial Epilepsy, Followed by Temporary Unilateral Paralysis of the Face and Tongue. Frank R. Fry.
45 Hemorrhage After Tonsillotomy. H. A. Leipziger.
46 The Hygiene of Pregnancy. Charles E. Paddock.
47 Smallpox; Its Differential Diagnosis. J. C. Sullivan.
48 The Great Social Evil; Abortion and Sterility. Wm. V. Loftus.

### Northwestern Lancet (Minneapolis), September 15.

49 *A Safe Milk-Supply. H. M. Bracken.
50 *Intestinal Obstruction, with Report of a Case. J. W. Andrews.

### Virginia Medical Semi-Monthly (Richmond), September 12.

51 *Wholesale poisoning from the Ptomaine of Milk. T. M. Baird.
52 *Absence of Appendix Vermiformis in Two Cases. Jacob Michaux.

### Therapeutic Gazette (Detroit, Mich.), September 15.

53 *Two Cases of Nephrectomy for Sarcoma of the Kidney in Children, with Operative Recoveries. Robert C. LeConte.
54 Two Cases of Fistula in Ano. Joseph M. Mathews.
55 The Diagnosis and Palliative Treatment of Reducible and Strangulated Hernia. Thomas H. Manley.
56 *Concerning a New Series of Synthetic Salts: The Nucleids of Iron, Copper, Mercury and Silver. E. R. Larned.
57 *Puerperal Eclampsia. J. T. Reddick.
58 Ichthyol in Rheumatism. George S. Post.

### Medical Sentinel (Portland, Ore.), August.

59 President's Address, Washington State Medical Society. J. W. Bean.
60 The Diagnosis and Treatment of Valvular Heart Disease. C. Quevli.
61 Cysts of the Kidney. Kenneth A. J. MacKenzie.
62 An Extra-uterine Pregnancy Retained Ten Years. J. B. Eagleson.

63 Method and Accuracy in Surgical Technic. R. C. Coffey.
64 Disinfection of Dwellings After Contagious Diseases. George W. Libby.
65 The Melancholic Man. Henry W. Coe.

International Medical Magazine (N. Y.), September.

66 *The Importance of Urinary Analysis in Phthisis. S. Edwin Solly.
67 *Electricity in Chronic Bright's Disease. A. D. Rockwell.
68 *Uremic Paralyses. D. J. McCarthy.
69 *The Customary Therapy of Kidney Diseases. Carl von Noorden.
70 The Significance of Intraocular Lesions Associated with Albuminuria. Walter L. Pyle.
71 Medicolegal Aspect of Chronic Alcoholism and Dipsomania. F. Savary Pearce.
72 The Management of Labor Complicated by Large-Sized Cysts of the Uterine Appendages. L. J. Hammond.

Medical Examiner and Practitioner (N. Y.), September.

73 The Early Diagnosis and Early Treatment of Cutaneous Cancer; Epithelioma. Charles W. Allen.
74 Course of the Ureters. Byron Robinson.
75 Female Risks. E. Holovtchiner.
76 An Endeavor to Estimate the Value of Certain Doubtful Lives for Life Assurance. F. LeM. Grasset.

Cleveland Medical Journal, September.

77 *Animal Tuberculosis. D. N. Kinsman.
78 *Some Observations on Appendicitis Based on 372 Operations. George W. Crile.
79 Case of Subdiaphragmatic Abscess of Splenic Origin. Charles S. Hamilton.
80 *Observations on Typhoid Fever. L. G. Leland.
81 On the Diagnosis of the Renal Function and Its Relation to the Surgery of the Kidneys. William E. Lower.

St. Louis Courier of Medicine, September.

82 Robert Willan and Dermatology. W. A. Hardaway.
83 Conditions I Have Found in Operating for the Radical Cure of Oblique Inguinal Hernia. Francis Reder.
84 Report of Two Interesting Cases of Brain Injury. F. B. Shields.
85 Aneurysm of the Transverse Aorta and Innominate Artery. William T. Coughlin.
86 Medical Examinations in Our Public Schools. E. A. Donelan.

Peoria Medical Journal, September.

87 Pharyngo-mycosis. L. R. Ryan.
88 Surgical Treatment of Retro-displacement of the Uterus. F. B. Dorsey.
89 Chronic Urethritis, Stricture of Large Caliber. Rolland L. Green.

St. Paul Medical Journal, September.

90 The Character and Tendency of Our Current Medical Literature; Notes on Its Development, Progress and Influence. Franklin Staples.
91 Dilatation of the Stomach. Christopher Graham.
92 *The Fallacy of Drainage in Diffuse Septic Peritonitis. Donald B. Pritchard.
93 *The Blood in Relation to Anesthesia—Especially Chloroform and Ether. Carl J. Holman.
94 Organization of the Medical Profession. Arthur Sweeney.
95 How Can the Public Best Be Educated as to the Importance of Preventive Medicine? H. M. Bracken.
96 The Stomach Tube in Practice. A. E. Hedback.
97 Some of the Etiologic Factors in Epilepsy. W. A. Jones.
98 Fractures and Dislocations of the Nose and Their Treatment. J. W. Robertson.
99 Sarcoma of Unusual Size. W. H. Magie.
100 Crile's Instrument for the Temporary Closure of the Carotid Arteries.

Carolina Medical Journal (Charlotte, N. C.), August.

101 Some of the Recent Remedial Measures. W. W. McKenzie.
102 Creosote. J. B. Wright.
103 Uric Acid Excess. D. J. Hill.
104 So-Called Dyspepsia. Charles A. Julian.
105 *Ergoapiol (Smith) in Diseases of the Female. Charles H. Shepard.
106 Summer Diarrheas of Children and Their Treatment. M. A. Auerbach.

Providence Medical Journal, September.

107 Pulmonary Embolism. George S. Mathews.
108 Pus in the Urine. Herbert Terry.
109 The Trade and the Profession. Hermon C. Bumpus.
110 The Treatment of Typhoid Perforations. Henry B. Potter.

Occidental Medical Times (San Francisco), September.

111 *Annual Report of the President of the San Francisco Board of Health for the Year Ending June 30, 1902.
112 Address Delivered Before Students of the University of California at the Opening of the Session of 1902. Harry M. Sherman.
113 From Ether to the Physiologic Unit. George Adam.
114 *Gonococcal Peritonitis. J. Henry Barbat.

Canadian Practitioner and Review (Toronto), September.

115 Ventro-fixation, Its Value and Results. J. Algernon Temple.
116 Strictures of the Esophagus. A. B. Welford.
117 Cirrhosis of the Liver in the Young. J. T. Fotheringham.
118 The Diagnosis of Stone in the Bladder. A. Groves.

Ophthalmic Record (Chicago), August.

119 *The Prognosis of Myopia. Francis Valk.
120 A Case of Hydrophthalmus. Gilbert D. Murray.
121 A New Self-Illuminating Ophthalmoscope. G. F. Suker.

Medical Summary (Philadelphia), September.

122 Chronic Diseases. J. L. Wolfe.
123 Neurasthenia. S. A. Buchanan.
124 Milk. J. M. Jones.
125 A Bad Case of Constipation. Ben H. Brodnax.
126 Typhoid Fever. M. G. Price.
127 The Therapeutic Use of Hydriodic Acid. Louis J. Pons.
128 The Dreamer in Medicine. J. M. Lynch.
129 Therapeutic Value of X-Rays. Thomas C. Leitch.
130 The Mosquito. Silas Hubbard.

Physician and Surgeon (Detroit and Ann Arbor, Mich.), June.

131 The Passing of the Historic McDowell Building at Danville, Ky. William L. Lowder.
132 *In Plain Language What May We Expect from Treatment of Ocular Muscle Errors? Walter R. Parker.
133 *Practical Suggestions on the Administration of Ether and Chloroform. Joseph B. Whinery.

New Yorker Medicinische Monatsschrift, August.

134 Zur Casuistik des Empyems der Stirn- und Siebbeinhohle und dessen Complication seitens des Auges. Max Toeplitz.
135 Zur Behandlung der Dysenterie. A. Herzfeld.
136 Ueber kunstliche Sauglingsernahrung. Johann Landau.

Denver Medical Times, September.

137 President's Address, Colorado State Medical Society. R. W. Corwin.
138 Uncertain Therapeutics. J. M. Blaine.
139 On the Trail of a Pain. Edward C. Hill.
140 Syphilis of the Nervous System. Millard P. Sexton.
141 The Treatment of Dropsy of Cardiac Disease. S. C. Reisman.

Medical Review of Reviews (N. Y.), August 25.

142 *The Value of the Roentgen Rays in the Treatment of Carcinoma. Carl Beck.

Memphis Medical Monthly, September.

143 Serum Therapy in Laryngeal Diphtheria. Adolph O. Pfingst.
144 The Prevention of Tuberculosis. Robert W. Tate.
145 A Modern Hospital. G. G. Buford.
146 Cancer of the Larynx Operated on Successfully by the Endolaryngeal Route. A. Bonain.
147 Acute Entero-colitis. A. C. Norman.

Journal of Medicine and Science (Portland, Me.), September.

148 A Few Facts Concerning Our Present Practical Knowledge of Certain Common Infectious Diseases—Notes on Modern Advancement. Franklin Staples.
149 A Case of Bothriocephalus Latus. C. E. D. Lord.
151 Criticisms on Christian Science. E. H. Judkins.

Western Medical Review (Lincoln, Neb.), September 15.

151 The Passing of Materia Medica and Therapeutics. I. C. Philbrick.
152 Progress in Therapeutics in the Diseases of Children. Georgiana Grothan.
153 Atypical Cases of Ectopic Gestation. Charles C. Allison.
154 Ulcer of the Cornea in Smallpox. D. C. Bryant.
155 *Etiology and Treatment of Migraine. J. M. Aikin.
156 Cerebral Thrombosis. F. E. Coulter.
157 Care in Vaccination. S. R. Towne.
158 Acute Suffocative Pulmonary Edema. LeRoy Crummer.

American Medical Compend (Toledo, Ohio), September.

159 Small Foreign Bodies in the Cornea; Their Results and Treatment. George F. Suker.
160 Infant Feeding. Wm. A. Dickey.
161 The Use of Adrenalin Chlorid in Typhoid Fever. Edwin A. Murbach and J. U. Foster.
162 Why Patients Sometimes Get Worse. David O. Hungerford.
163 *Ergoapiol (Smith) in Diseases of the Female. Charles H. Shepard.

Medical Bulletin (Philadelphia), September.

164 Sycosis—Rupia—Hyperidrosis. John V. Shoemaker.
165 The Treatment of Kidney Disease. George W. Pfromm.
166 Apoplectiform Neuritis—Paroxysmal Meralgia—Hysterical Hemiplegia and Hysterical Breast—Hysterical Apoplexy. Dr. Raymond.

Texas Medical Journal (Austin), September.

167 The Founding of a State Institution for Epileptics in Texas. B. M. Worsham.
168 Cholera Infantum. S. Burg.

Columbus Medical Journal, August.

169 Diarrhea. George M. Waters.
170 Care of the Nose. C. P. Linhart.
171 Female Sterility. Theodore E. Courtright.

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1. **Bright's Disease.**—Porter's article is a lengthy one discussing the pathology and treatment of Bright's disease. The conclusions are summed up in the following: "1. To analyze thoroughly the results of treatment in 'Bright's Disease' one must have a clear conception of the histology and physiological functions of the kidneys. 2. Its complex pathology must be clearly understood. 3. All the etiological factors must be given full consideration. 4. The etiological factors are numerous and very complicated in their action. 5. Only one, if any, of these can be reached by surgical interference. 6. Most of the etiological factors can be modified or removed by well-directed rational dietetics and therapeutics. 7. Histologically speaking, 'Bright's disease' can never be cured. 8. Physiologically speaking, the etiological factors can be modified, and often removed, the symptoms held in abeyance, while the renal glands

perform their functions normally. 9. 'Bright's disease' is by nature an oscillatory malady, accompanied by frequent remissions and exacerbations. 10. Remissions must not be mistaken for cures. 11. Rational dietetics and therapeutics offer the largest possibility for a complete physiological cure. 12. A well-regulated mixed diet, especially if composed largely of the animal class, when it can be tolerated, yields the best results. 13. All therapeutics to be rational must be directed not at the pathological lesion *per se*, but toward establishing a more perfect digestion and metabolism and a decrease in the work imposed upon the renal glands."

2. **Tuberculosis of the Urinary Tract.**—The diagnosis of urinary tuberculosis is discussed at length by Newmark, who insists on the necessity of keeping in mind that there is no one method or one single clinical feature for the diagnosis. All the facilities of laboratory and clinical observation are required sometimes. The frequent desire to urinate with frequent micturition and the pathologic condition of the urine are the chief symptoms met with. The frequent desire to urinate is usually the first symptom to call the patient's attention, and it becomes more frequent as the disease advances. It is soon associated with pain which is usually in the middle of the penis, being different in this respect from that of stone, which is located at the meatus. In the later stages the violent contractions and the periods of inflammation diminish the lumen of the bladder so that it scarcely contains more than a tablespoonful. The urine is that of chronic catarrh, with two characteristic features, hematuria and tubercle bacilli, the latter generally lying parallel with each other in groups, thus being different from the smegma bacillus which may occur singly or in irregular groupings. Decolorization of the smegma bacillus also by acid alcohol is another distinguishing point as is also its more rapid growth in culture. The two places where the bladder tuberculosis is most liable to begin are the ureteral orifices and the trigone, the former especially when it is secondary to renal tuberculosis. In the treatment the diet and proper climatic and hygienic surroundings play as important a part as they do in other tuberculous cases. The internal use of urinary antiseptics and antitubercular drugs should be begun early, and he suggests guaiacol, beginning with 3-drop doses three times a day, increasing up to 20 drops, or the same number of grains of its carbonate. The urinary antiseptics, which are especially indicated when pus is found in the urine, are salol, resorcin, boric acid and methylene blue. He cautions against over-distension of the bladder in the local treatment, and he prefers for instillations weak solutions of corrosive sublimate. Nitrate of silver is of no value, and when a case of chronic vesical catarrh does not respond to a few nitrate of silver applications he is inclined to diagnose it as pyelitis or tuberculous disease. Sometimes it may be necessary to resort to surgery to relieve the pain and install permanent drainage. For this suprapubic cystotomy is preferable. The different forms of tuberculous kidney disease are noted, and he says while there are manifold symptoms the positive diagnosis can be made only by a careful study of the surgical history, and recourse to all diagnostic means, including careful bacteriologic examination.

4. **Silver Vitellin.**—This is a new organic silver compound described in the *Medical Record* of May 24, 1902. It is produced from a proteid derived by chemical manipulations of wheat and subsequently combined with silver. It contains 30 per cent. of silver and is extremely soluble. Its use in gonorrhea is here described by Christian who, from his experience in the University Hospital, Philadelphia, finds it the best silver compound ever offered for this purpose and gives the following reasons for this belief: "1. It is absolutely free from any irritating properties, solutions as high as 5 per cent. causing no discomfort. 2. The gonococci on and beneath the urethral mucous membrane are rapidly destroyed. 3. The amount of urethral discharge is in a majority of cases at once lessened in a marked degree. 4. The actual duration of the disease is shorter than is obtained by the use of any other silver salt. In our cases thirty-eight were cured in from two to four weeks."

6. **Myomectomy vs. Hysterectomy.**—McCosh reports his experience in practice with uterine fibromyomata, describing the operation and illustrating it with cuts. He offers the following conclusions: "1. In young women with uterine fibroids demanding removal myomectomy should always be the operation of choice. 2. Myomectomy is possible and advisable in the great majority of cases of fibroid tumors in young women. 3. For the safe performance of myomectomy the strictest asepsis is needed, otherwise it becomes a most dangerous operation. 4. In the operation of myomectomy fear of hemorrhage should be case aside and bold and rapid methods should be adopted. 5. The operation is attended by the same danger to life as is hysterectomy. 6. The ultimate results as regards menstruation, pain and pregnancy, are satisfactory."

7. **Complete and Partial Hysterectomy.**—Montgomery favors the complete operation, especially the method of Doyen. "It is hardly necessary to say that it consists in raising the uterus with the enclosed tumors through an abdominal incision, and having it held by an assistant well over the symphysis, while an incision is made with scissors through the cul-de-sac upon forceps which were previously placed in the vagina. Through the opening thus formed the cervix is seized, drawn upward and severed with scissors from its vaginal attachment. With slight pressure with the finger the cervix is easily drawn away from the bladder and torn from the broad ligaments. The uterine arteries are generally laid bare and can be seized before bleeding, or upon the first spurt. The uterus is thus pulled upon until the vesico-uterine pouch is reached, which may be broken through, and the uterus is only attached by that portion of each broad ligament which contains the ovarian artery. This is seized with compression forceps external to the ovary and the uterus cut away. The broad ligaments are crushed with the angiotribe external to the forceps and ligated with chromic catgut in the groove. The uterine arteries are ligated with the same material, and the peritoneum closed over the vagina with continuous catgut suture. This suture should be so introduced as to draw up the vagina at each lateral angle." He does not believe that leaving a small portion of the cervix can either form a better vagina or lessen the tendency to senile atrophy. It makes it more difficult to prevent the formation of dead space in which serum or blood accumulates and which, from its proximity to the bowel, can readily become infected. When the cervix is removed there is left a funnel-shaped cavity which drains into the vagina. The following advantages are claimed for the complete operation: "Expedition in performance of the operation; complete and secure hemostasis; increased freedom from septic infection; and the entire removal of an organ, the retained portion of which may be the source of subsequent degeneration."

9. **The Diagnosis of Skin Diseases.**—Dyer offers the following as the cardinal points in the diagnosis of skin disorders: "1. The location of the disease is the first point of study; 2, then the distribution on the particular region on which it occurs; 3, the arrangement of the component parts, or lesions. The lesions themselves must be studied in detail so as to classify the disease. Besides these cardinal points there are certain points in diagnosis which are important in their value as guides: 1. Eruptions which are bilaterally symmetrical are either constitutional in origin or are exposed to the identical local cause on both sides of the body. 2. Parasitic diseases are found on the flexors preferably, or on the exposed parts of the body. 3. The more chronic diseases of the skin become the deeper the color; on the other hand, the brighter and more vivid the color the more acute the disease. Scales are the evidence of chronicity; likewise ulcers and scars. 4. Fluid lesions seldom itch. Papular eruptions almost always itch. 5. Single ulcers are almost always syphilitic, trophic, traumatic or malignant; multiple ulcers are tubercular, syphilitic, or malignant. 6. On the face ulcers are seldom due to other causes than cancer, syphilis or tuberculosis. 7. The color of eruption on the Caucasian is always important in diagnosis. Syphilis is pigmented brown or buff as its eruptions fade or disappear. Leprosy is always shaded brown or purple. Lichen ruber is always violaceous or white. Psoriasis is always pale

red covered with white scales. Seborrheic eczema is always yellow red with greasy scales. 8. The odor in skin diseases is important. Syphilis, when ulcerating, smells rancid; favus smells mousy; varicose ulcers smell sweet; neurotic ulcers, or those of leprosy are nauseous, foul and intense; rodent ulcer has a smell of rotting meat."

11. **Bronchial Asthma and Allied Disorders.**—Robinson pleads for the hygienic treatment of bronchial asthma, giving all due attention to the reflex causes. He favors change of scene and the water cure treatment, varied, of course, according to the special conditions as to the drain on the kidney function, involvement of the respiratory tract, etc. For the former he would advise the mild alkaline springs such as the Homburg or Royan, and for the latter the sulphur springs like those of the Aix-les-Bains are more beneficial. In this country he advises the Sharon or Richfield springs, or going to some region of the Adirondacks or the White Mountains. Any sinning agent or organ requires attention, especially the nose and stomach. In these cases there is apt to be dilatation of the right heart, hence high mountainous elevations are to be avoided. He does not believe the vicinity of fresh-water lakes or the seashore is advisable. The digestion should be carefully looked after. In cases where there is an accompanying skin trouble, arsenic is often useful. As far as surgery is concerned he considers it to be a last resort.

13. **Chronic Colitis and Jejunostomy.**—Gibson advocates the formation of a fistula in the cecum, using a method analogous to Kader's operation for gastrostomy, and reports cases which he thinks indicate that at least certain cases can be remedied by this method. He uses the valvular fistula also as an adjunct to certain operations on the stomach and for introducing food directly through the jejunum. He reports a case which, however, did not survive. He recommends it on the following grounds: "That there is a demand for some such additional means of maintaining the patient's strength immediately after a severe operation on the stomach. That it promises to be efficacious. That it adds little, if any, risk to the original operation. That it can be made after discontinuance of the anesthetic, and therefore does not substantially prolong the operation. That the feeding can be begun, if necessary, on the operating table. When the fistula has outlived its usefulness it can be put out of commission by withdrawal of the tube, and should close spontaneously in two or three days without essential leakage." He also adds that he is contemplating using such a fistula as a substitute for gastroenterostomy in some advanced cases. The operation would then consist simply of opening the abdomen long enough to reach and bring up the first loop from the duodenal-jejunal junction. The patient will finish his existence on the same rationale as the patient after gastrostomy.

14. **The Iliopsoas Bursa.**—The summing up of Lund's article is given as follows: "1. The iliopsoas bursa possesses surgical importance, owing to its position and its frequent connection with the hip-joint. It frequently extends above the pelvic brim. 2. It may be involved in osteo-arthritis, gonorrheal infection or suppurative arthritis of the joint, and the symptoms due to the disease of the bursa may dominate the clinical picture. 3. In gonorrheal arthritis incision of the bursa affords an easy method for reaching and draining the joint. 4. In osteo-arthritis relief of pain is afforded by incision of the bursa. 5. The bursa is best reached by a vertical incision just below Poupart's ligament, between the anterior crural nerve and the femoral artery. The iliopsoas muscle may be drawn inward, or, as is perhaps more direct and preferable, the fibers may be separated by blunt dissection in the line of the incision. 6. Where the bursa is connected with the joint a ready diagnosis of the condition of the head of the femur and acetabulum may be made by passing the fingers through the opening in the bottom of the bursa. 7. Iliopsoas bursitis should be more often considered in the differential diagnosis of obscure tumors in the groin, and such a diagnosis should be possible in cases where the hip-joint is known to be diseased and a tumor suddenly appears in front of the joint, under the anterior crural nerve and femoral vessels, which is very painful and tender, and perhaps gives to the palpating finger a sensation of deep fluctuation."

15. **Varicose Veins.**—Blake first gives a historical review showing the operation for varicose veins dates back to ancient times, quoting from Plutarch that Marius underwent an operation where both legs were to be operated on at one sitting, and remarks that we have not progressed far beyond this at the present time. He considers multiple ligation for varicose veins more effective than the other methods. He criticises the Trendelenburg method slightly as interrupting the return circulation too seriously in certain cases. In the future he says it is desirable to settle two points in the operative treatment of varix: "1. To determine how often the deep veins are actually and clinically affected, in connection with superficial varicosity, and how it is possible to determine the condition of these deep veins before operation. 2. To subject a large number of cases of all degrees of varicosity and its complications to the same method of treatment, and trace the results carefully for one or two years. This method of treatment might be the unmodified Trendelenburg operation, or this operation combined with local dissection. The palliative treatment should be tried at first, and then if this is not followed by improvement, and in absence of organic disease, operation should be recommended. The future history of the case should be carefully followed, as in this way only can statistics be collected from which logical conclusions can be drawn.

16. **Tonsillar Re-Infection.**—Goodale finds the tonsils are not protective organs but are usually open canals of connection between the interior of the organs and their exterior, which afford a way for the polynuclear leucocytes to make their way to the surface. The pathogenic bacteria do not seem to be able to penetrate the tonsillar tissue itself. There are, possibly, special lesions being produced by infectious organisms in the tonsils in the way of proliferating the lymphoid and endothelial cells of the organs and inducing local foci of suppuration. Such intrafollicular abscesses may discharge into the veins and produce general septicemia.

17. **Smallpox.**—Dillingham reviews the diagnosis of smallpox, illustrating his remarks with cases and sums up towards the close the general characteristic differential symptoms. He remarks that each case must be carefully studied in regard to its history, disease symptoms and its lesions. The character and life duration of the lesions individually or collectively must be taken into consideration, and ever then in many cases, and although backed up by a large experience, one may fail in making a correct diagnosis.

18. **Typhoid and Allied Infections.**—The different infections of the typhoid type are noticed by Coleman, who remarks that we must abandon the idea of specificity of typhoid fever, unless we wish to be hopelessly confused. He thinks we ought to confine the terms paratyphoid and paracolon to the domain of bacteriology and broaden the scope of the etiology of typhoid fever to include these several organisms: *Bacillus fecalis alcaligenes* (?), *Bacillus typhosus, Bacillus paratyphosus,* and certain members of the paracolon group (beta-paratyphoids). He goes over the reported cases, their wide distribution and the relative frequency of the paratyphoid manifestations, finding that, excluding Widal's case which did not present any constitutional symptoms, 27 cases of paratyphoid have been reported. In two, autopsies were performed and the characteristic symptoms of typhoid were absent. Clinically they resemble, of course, the genuine disease. Most of the cases were among young male adults. He notices also the cases reported by Brill which failed to give the Widal reaction, and suggests that, if they were examples of paratyphoid, previous typhoid infection did not produce any immunity against paratyphoid. He asks: Could it be possible that some of the second attacks of typhoid fever reported have really been due to infection by different members of the same group of bacilli? The only reliable criterions for diagnosis are absence of the Widal reaction in proper dilution (not less than 1 in 40) with a positive reaction against a known paratyphoid bacillus or the recovery of the paratyphoid bacillus from the blood, urine, stools, or complicating inflammatory process.

20. **Venereal Prophylaxis.**—Spencer reviews the recommendations of the New York committee and condemns regulation of open prostitution and segregation; the one as putting a premium on illicit vice and the other as rendering it familiar and less repulsive. He holds that education must be the principal means of prophylaxis, with proper regulations for treatment, and there should be more hospital accommodations for cases of this sort.

22. **School Vaccination.**—The point made by Fisher is that compulsory vaccination may lead careless or unprincipled physicians to give false certificates. He thinks the control of certifying to vaccination should be taken away from physicians in general and vested in special officials of guaranteed competency. The present methods sometimes give anti-vaccinationists a chance to make capital of some of the mistakes due to careless certification.

25.—Dr. Osler's address was noticed in THE JOURNAL of October 4, p. 855, and editorially in this issue.

26. **Brain Tumor.**—The case here reported by three authors is given in detail, and the following conclusions as regards the surgery of these cases are offered: "1, that as soon as a brain tumor is clearly diagnosticated, if presumably it is in an accessible area, operation should at once be performed; 2, that a Röntgen ray investigation should be added to the other methods of making a diagnosis; 3, that large openings in the skull should always be made; 4, that the operation should be osteoplastic in order not to leave a permanent opening in the skull and to add to the chances of maintaining the vitality of the bone flap; 5, that preparation should always be made to perform a Crile operation for temporary clamping of the carotids as soon as hemorrhage becomes threatening, and 6, that the operation in some cases should be done in two stages, the propriety of this procedure being determined by the circumstances attending the first operation."

29. **Ulcers of the Duodenum.**—The conclusion of Murphy and Neff's article appears in this number and the authors find that, in many cases, the diagnosis is difficult or impossible without exploratory laparotomy, and in many cases there are no evidences of duodenal disease prior to the perforation. The most important physical sign in addition to those of perforative peritonitis is the flatness of the superficial piano percussion note. In the case reported leucocytosis was pronounced. It is not a necessary manifestation of perforation or of inflammation, but simply means the reaction of blood to infection. and may be absent also in typhoid perforation. Collapse is absent in duodenal perforation except where associated with severe hemorrhage. It is not a manifestation of perforation *per se*, and is always secondary to abrasions of the duodenal or peritoneal endothelium permitting rapid absorption of the products of infection. The operation should be performed at the earliest possible moment after occurrence of the perforation and the mortality is in direct proportion to the delay. The longer the escaping matter is in contact with the peritoneum the greater the danger of destruction of the endothelial covering and of absorption. The operation must be complete, that is, it must be pursued to an effective suture of the perforation; drainage alone is insufficient. The incision should be through the right rectus muscle and can be carried up to the costal arch or downward to the symphysis pubis without dividing any of the transverse muscles. Drainage after suture is a matter of personal choice dependent on the pathologic conditions present. The after-treatment is that commonly followed after abdominal section excepting that the patient is kept elevated in bed at an angle of 35 degrees for the first forty-eight hours. The prognosis depends on the virulence of the peritonitis produced, on the time the material is allowed to remain in the peritoneum and on the presence or absence of abrasions of the peritoneum at the time of operation.

30. **Placenta Previa.**—The great need of the early diagnosis of placenta previa is the first thought, as Ayers remarks. The custom should be, he thinks, to examine every pregnant patient at the sixth month vaginally and abdominally. This would cause a heavy reduction in the maternal mortality from placenta previa. The ideal time for induction of labor in cases of central or marginal locality is, he thinks, best fixed at the eighth month. If the patient can be put in a hospital and have the very best of care and the pregnancy is before the eighth month, it is advantageous and conservative to delay, other things permitting. Where the patient can not be constantly attended it is best to produce delivery at the earliest possible moment when proper preparation can be made. In case of partial placenta previa induced labor is rarely required and the condition is rarely recognized before term. The bleeding should stop when the head engages. Ayers gives the details of treatment of a case at length, and in conclusion discusses the propriety of Cesarean section. He thinks all that can be said of it is that the method has sufficient justification for further trial, but in an addendum to the paper he says that he believes even by applying Cesarean section to cases of placenta previa centralis, we shall not obtain better results as regards the fetal mortality than with our commonly practiced method. This is the conclusion he has reached after reading Schauta's article in the *Interstate Medical Journal* for April.

36. **Idiocy.**—The conclusions reached by Gillespie as to the obstetric aspects of idiocy are that the more frequent use of the forceps for the object of preventing asphyxiation will tend to decrease the percentage of idiots and infantile cerebral palsy, and plastic paralysis will also decrease. Congenital defects are no doubt often due to injury during parturition and the rational management of labor will reduce the number of these cases. In thoroughly developed children asphyxiation occurs before birth, in the premature it generally develops after birth. A clinical distinction may be made between cases where cerebral injury results from asphyxia and those in which asphyxia follows cerebral injury, from the fact that in the former the circulation is disturbed from the start, while in the latter the disturbance of circulation follows respiratory failure. In children with inherited neurotic tendencies idiocy may follow an injury that would not have serious consequences in one of more stable antecedents. While injury from forceps is not a very prominent cause of mental defect, there can be no doubt that in exceptional cases such conditions can be ascribed to their abuse and not their use, and for every case of idiocy or paralysis resulting from asphyxia we have many fetal deaths which might have been saved with more skilful obstetrics.

37. **The Stomach-Tube.**—The uses of the stomach-tube are laid down by Bettmann, who thinks that in most cases it can be dispensed with, and is rarely required in any case where the stomach can empty itself. It is of use when we want to give the stomach rest. In advanced or obscure cases, especially in those in which organic changes have occurred in the stomach, it aids us in the determination of the exact pathologic condition. In certain conditions where the stomach is in a constant state of irritation by secreted mucus, food remnants, fermentation products, etc., the tube offers us a rational and valuable therapeutic aid.

40.—See abstract in THE JOURNAL, xxxviii, p. 1389.

42.—Ibid.

49. **A Safe Milk-Supply.**—The conclusions as to a perfectly safe milk-supply are given by Bracken as follows: "1. To secure a safe milk-supply it is necessary that milk should be collected and cared for under strict sanitary regulations. The milk should be controlled by such regulations from the time it leaves the cow until it reaches the consumer. 2. Only cows that have been tested with tuberculin, and thus shown to be free from tuberculosis, should be permitted in dairy herds. 3. It is impractical to attempt to secure a pure milk-supply by the occasional testing of dairy herds with tuberculin, with no restrictions upon the herds during the intervals between testings. 4. All milk that is not handled under the most rigid sanitary regulations from the time of its collection until it has reached the consumer should be pasteurized. 5. The commercial pasteurization of milk is a practical means by which to secure a safe milk-supply for large cities, for by this means the filth which careless milkers have allowed to enter the milk is removed and the dangers from the various pathogenic bacteria which may be present is reduced to a minimum. 6. Pasteurization, while a fair commercial makeshift, is but a

poor substitute for cleanliness as a means of securing a safe milk-supply."

50. **Intestinal Obstruction.**—The symptoms of intestinal obstruction are reviewed by Andrews, who reports a case, and he emphasizes the following points: "1. In diagnosing intestinal obstruction, consider well the associated symptoms, and do not place too much reliance upon any one or two symptoms. 2. Operate as soon as the diagnosis is made; do not try medicines for a few days and then operate, for this would be a fatal compromise. 3. If necessary to relieve pain and husband the strength of the patient, opiates may be given after the diagnosis is made and before the operation. 4. Never give opiates after the operation. 5. Perhaps of most importance, if obstruction has existed for two or three days, the abdomen is distended and tympanitic, the pulse rather rapid and wiry, do not try to make a technically complete operation, but rather perform an enterostomy, and be content with an artificial anus." In the case reported he thinks he might have saved life if he had made an artificial anus under local cocain anesthesia and allowed the bowels to have thoroughly emptied themselves, and while he has always used the Murphy button for intestinal anastomosis he is inclined to believe anastomosis by suture better, as leaving a larger opening and causing less danger of obstruction. He also remarks that the intestine will not bear much handling. The sooner the surgeon learns this the sooner will he succeed in all abdominal surgery.

51. **Milk Poisoning.**—Baird reports an epidemic of poisoning by milk ptomains in a Virginia hotel, which he attributes to the keeping of milk in metal vessels. This he thinks hastens the process of formation of ptomains. In the case reported the epidemic was checked when the vessels were disused.

52. **Absence of Appendix.**—Two cases are reported by Michaux in which the appendix was found to be entirely absent without any trace of one having existed before. In each of the cases appendicitis was diagnosed. One proved to be a perinephritic abscess and the other a degenerated and cystic ovary.

53. **Sarcoma of the Kidney.**—The question of operating in this generally fatal condition is the principal reason for this article by LeConte in which he reports two cases, one of which was temporarily relieved, the other dying 45 days after operation from alleged pneumonia. The chances of operation are, of course, not the best, but from the experience and findings of other authorities, including two cases by Abbe which might perhaps be called cures, LeConte deduces the following conclusions: "1. With modern methods the immediate mortality of the operation should be reduced to 15 per cent., or even a little lower. 2. Operation should prolong the average duration of life, dating from the first symptom of the disease. 3. The percentage of cases that will go three years or more without a sign of recurrence—the so-called cures—will be very greatly increased, if the physician can make an early diagnosis and can be assured of the fact that an immediate operation is proper and justifiable. 4. When the ultimate results are fatal, the operation relieves the suffering of the patient, and makes death less painful."

56. **The Nucleids in Medicine.**—Larned's article treats of the value of the synthetic compounds of iron, copper, mercury and silver with nucleinic acid, reviewing the literature and the following are his deductions: "1. These new salts of nucleinic acid are rational reconstructives; they are true tonics; they increase physiologic resistance; they increase the functional activity of secretory organs. 2. They are powerful germicides, while not harmful, but beneficial to the tissues. 3. If our present knowledge of nucleins and leucocytosis is correct, then the nucleid is the proper form for administration. 4. We do not positively know the rationale of their action, but we have nothing which holds out such prospects for successful medication. 5. These new synthetic salts are valuable additions to the pharmacopeia."

57.—See abstract in THE JOURNAL, xxxviii, p. 1389.

66. **Urinary Analysis in Phthisis.**—The importance of repeated uranalysis in phthisis is insisted upon by Solly, who remarks that albuminuria is a dangerous complication, and while Bright's disease is rarely the cause or precedent of phthisis, it is not an unfrequent sequel. The large quantities of meat and eggs advised in phthisis should be curtailed in Bright's disease, especially the eggs, and milk should be substituted as far as possible. Tuberculosis of the kidney sometimes occurs in the course of chronic phthisis, and while usually hopeless, yet its early recognition and treatment may prolong life and relieve suffering. Diabetes is not of infrequent occurrence, neither is diabetes insipidus rare. Aside from the diagnostic value of uranalysis, it is of value in estimating the digestive and other disorders. The urine is often diminished during sweating. Urea increases during hectic and diminishes with vomiting or diarrhea and pleural effusions. The chlorids are increased during hectic and diminished with copious expectoration and may disappear with an intercurrent pneumonia. The diazo-reaction, according to his experience, is rare, and occurs only in complications. What is needed is an ordinary chemical analysis, and if it shows an abnormal condition other tests should follow. With abnormal specific gravity it is well to insist on daily measurements of urine. If it is high and the amount of urine normal it may be taken to indicate an excess of uric acid. When there is an excess of urates, it always shows a faulty metabolism and should incite investigation of the diet, rest, exercise, etc. Hyperacidity with scanty urine, if persistent, is often an indication of renal lithiasis. An alkaline urine after digestion, with ammonia, is evidence of cystitis. An excess of indican generally means intestinal indigestion of putrefactive character and may also indicate retained putrid pus. If lithemia occurs it is well to follow it up and treat it, there being a uric acid diathesis upon which the tuberculosis and phthisis has become engrafted. The treatment of the underlying disorder may help the complications. Tuberculosis often occurs in persons who have a gouty bronchitis and in any case it is important to take the history and study the subject thoroughly. He has found urinary analysis one of the necessary procedures.

67. **Electricity in Bright's Disease.**—Rockwell finds that electricity is of advantage in Bright's disease, though it can not be shown that it affects the waxy or cirrhotic kidneys. Its action on simple hyperemia, acute inflammatory affections and many passive congestions is especially mentioned. It may be that they are cases of simple renal hyperemia, not yet having crossed the boundary line of actual Bright's disease, but he thinks some of them are more serious. The methods of the employment of electricity in his hands that have been most useful are the high tension faradic current and the so-called static wave current, the latter especially.

68. **Uremic Paralyses.**—The various forms of uremic paralyses are described by McCarthy, who remarks that they are most commonly seen in the chronic forms, like chronic interstitial nephritis, and the paralytic symptoms, as a rule, will follow the kidney symptoms, but exceptions are frequent, especially in chronic dements and alcoholic cases. Premonitory symptoms, when they occur, have nothing unusual about them. Convulsions are a very frequent accompaniment of paralysis, and the latter is usually more intense after the seizure. It may be complete or partial and the reflexes may be lost, present or increased. Sensation is usually preserved. Speech disturbances may be varied. Where the paralysis is hemiplegic or brachial in type, and affects the right side, motor aphasia is met with. Word deafness has been described, but speech tests, on the whole, are usually unreliable. The diagnosis between this condition and organic hemiplegia is at times impossible and always difficult. The history of kidney disease is important and watching the patient, detecting a gradual return of power, to a certain extent will exclude capsular hemorrhage. The type of kidney disease associated with these paralyses usually produces very little albumin in the urine, and the specific gravity is usually low before the attack. It is the diminution in quantity of the urine that decides the attack. A careful examination for tube casts should be made. The same pathologic conditions exist as might lead to rupture of a cerebral vessel and the diagnosis will have to be made

often on account of the varying character of the paralytic symptoms, convulsions, condition of the reflexes, etc. The pathologic findings consist mainly in an edematous or wet brain, though not always. Occasional absence of edema makes it probable that the paralysis is independent of this condition. The commonly accepted theory is that of a toxin acting on the cerebral cells, and the treatment and prognosis is the same as those of the uremia. The mental state varies between acute delirium and chronic delusional types. The latter may be associated with hallucinations of sight and hearing, and while a single delusion may occur, it is usually not completely systematized.

69. **The Therapy of Kidney Diseases.**—The dietetic treatment for chronic and acute nephritis consists largely in the milk diet, though there may be cases in the chronic types where long-continued use of this diet works harm. Where patients do not bear the milk diet well, a small quantity of meat, preferably white meats, one or two eggs, some vegetables, fruits, etc., may be given. Strong condiments, alcohol and other stimulants are, of course, to be prohibited. In contracted kidney the diet may produce trouble. Most patients can endure a partial milk diet and Von Noorden would restrict the quantity of eggs and meat to be permitted. As to alcohol, opinions differ, but beer should be usually rigidly prohibited. Von Noorden gives a diet table for a special case which shows, he thinks, how impossible it is to draw conclusions in regard to the value of any certain diet from a short series of determinations of the albumin excretion. Fluctuations in this are valueless as regards this matter. In the chronic contracted kidney, albuminuria is still more unreliable. We should not attach too much significance to the changes in albumin excreted nor should we underrate their importance, especially if they occur parallel with the changes in the general condition. In exacerbations the eliminative power of the kidneys must be regarded, and tests by methylene blue or other chemicals that do no harm, may be of occasional value, but we can not draw any definite conclusions as to the power of the kidneys to eliminate the normal excretions from these. We must follow the much more tedious method of testing the elimination of these products themselves.

77. **Animal Tuberculosis.**—Kinsman reviews the principal data as regards the propagation of animal tuberculosis to mankind, and insists on the pasteurization of milk, cooking of flesh and regulating the herds according to the rules given by Bangs of Denmark, namely, the tuberculin test, elimination of the really sick animals, disinfecting the stables, and inoculating the healthy animals from time to time to determine their condition.

78. **Appendicitis.**—From an analysis of 372 operations Crile holds that it is perilous to let the case run until it has become severe, and that there is no reason for not advising the interval operations after the first attack, and of not operating on the appearance of the first symptoms of the second attack. When operation is not performed he would follow Ochsner's method of absolute rest for the intestines.

80. **Typhoid Fever.**—From the study of a number of cases, Leland has come to the conclusion that the cold pack is not as valuable an antipyretic as generally supposed, and that the production of antibodies is not materially facilitated, while the application of cold to the skin increases the violence of some complications, notably hemorrhage and meningitis. He has also made a detailed study of three cases of urinary infection. The majority of these he finds occur about the end of the third week, and that the infection of the urine is not always accompanied by vesical catarrh. The increased desire to urinate is not always present. The urine may be normal to the naked eye, and many of the cases carry a temperature attributable to infection alone. His article is illustrated by temperature charts.

92. **Drainage in Peritonitis.**—Pritchard's article is a plea against the use of drainage in intraperitoneal operations. He thinks we should not drain the peritoneal cavity, which fails us because we interfere with its work and it rebels. He reports two cases treated without drainage with good results.

93. **Blood in Relation to Anesthesia.**—The early ideas in regard to the temporary action of ether and chloroform on the blood are confirmed, according to Holman, by recent researches, and he specially thinks there is danger in their use when there is a very low percentage of hemoglobin. He reports a case of operation for gall-bladder disease with fatal results, which he attributes to temporary hemolysis by chloroform in a patient with low hemoglobin percentage, where there was insufficient nourishment brought to the respiratory centers.

105.—This article has appeared elsewhere. See The Journal of September 13, ¶92, p. 652. See also ¶163 in this issue.

111. **Report of the San Francisco Board of Health.**—The report of the president of the San Francisco Board of Health to the mayor is a criticism of the conduct of that official in regard to the plague cases occurring in that city.

114. **Gonococcal Peritonitis.**—Barbat reports a case to show that the gonococcus may produce serious general peritonitis and that the rather common idea that has been held that gonococcal infection amounts to but little in the abdominal cavity is an error. The culture tests from the tissues show the colon bacillus, but he does not think they were the cause of death as they were not found in the pus removed during life. All pus, he thinks, should be considered as dangerous in the peritoneal cavity.

119. **The Prognosis of Myopia.**—The relation of corneal curvature and the prognosis of myopia are insisted on by Valk, who says: "It seems to me that if we accept the relation between the curve of the cornea and the refractive condition and that the majority of our cases will show a shorter radius in both meridians than the normal curve, then we have some reason for the statement that in myopia of any degree if the radius of curvature is less than 7.65 mm. we have a case of refractive myopia and not an elongation of the eyeball. That the prognosis will be, in all reasonable possibility, that the myopia will not increase. Then, with full correction, our patients may continue their studies or use of the eyes with every prospect of good and useful vision. Furthermore, that with a reduced curve, showing a normal or longer radius, with any degree of myopia, then we have for consideration a case of axial myopia that may tend to increase even to serious impairment of sight. These cases must have full correction of the myopia with an examination of the refraction and glasses every six months or a year. If in time we detect any increase in the myopia then our patients must be cautioned in the use of the eyes, but a decided increase will call for the use of atropin, if necessary, and the entire cessation of the use of the eyes at any work calling for close application, until the refraction remains stationary for at least a year. Hence in this class of cases the close observation so frequently urged upon the profession by our many writers is very necessary and urgent; while in the cases of refractive myopia we may allow the use of the eyes, within reasonable limits, with confidence that we are dealing with an innocent myopia which will give useful vision during life."

132. **Ocular Muscle Errors.**—The effects of muscle insufficiency are noticed by Parker, who remarks that they have no one pathognomonic symptom. The headaches may be somewhat characteristic, extending to the top of the head and finally settling in the back of the neck, whereas refractive errors usually cause only frontal headache. For small degrees of deviation either upward or outward the use of correcting prisms may suffice. Slight deviations outward and upward more often give symptoms than a small deviation inward, but are more amenable to treatment. He does not claim that all headaches are ocular, but shows that in muscular imbalance, as in astigmatism, there may be a considerable chain of unfavorable symptoms.

133. **Anesthetics.**—Whinery gives a number of hints in regard to the administration of anesthetics. He says, first scrub one's hands with soap and water, which is especially necessary in operations about the head and neck. Sterilize the instruments. Always use fresh anesthetics and keep both

chloroform and ether away from gas flame. Have for emergency a hypodermic syringe in good working order, with strychnin, atropin, and nitroglycerin tablets, also nitrite of amyl and ammonia water. He thinks with more experience we will have less need of the tongue forceps. It is a good plan to have normal salt solution of the proper temperature and apparatus for giving it convenient. The hypodermic administration of 1/20 or 1/30 of a grain of strychnin in a feeble patient may be of service. He prefers with ether the slow method, with the cone at first some distance from the face, watching the pupils and muscular condition and the reflexes closely as well as the respiration. The pulse can be felt in the temporal or facial artery conveniently. It is often of service to intermit the anesthetic for a few minutes, especially when there is a tendency to cyanosis. With chloroform he always advises the slow method. He prefers the simple Esmarch's inhaler. It is his practice in the second stage of chloroform anesthesia to hasten the process by slightly increasing the amount and excluding a little more of the air. When this stage is passed, one can keep the patient under with a smaller amount of chloroform. A fall of the pulse to 60 is not alarming, but if it varies or becomes irregular it is wise to intermit the anesthetic or change to ether; the respirations are not so satisfactory as those under ether. There should be little cyanosis, if any, and marked duskiness of the face shows the patient is not getting sufficient air. The vomiting which sometimes is troublesome is usually caused by letting the patient partly come out from under chloroform. With ether you can check this by pushing the anesthetic; this can not so well be done with chloroform. No one should allow the operator to urge him to push the anesthetic to a dangerous extent. Where there are no contraindications his practice is to begin with chloroform and change to ether when the patient is well under the influence and he has never had any accident while starting an anesthetic in this way. The only danger from the heart in the ordinary anesthesia is in cases of muscular degeneration, and with a weak heart and in nervous apprehensive patients chloroform is most dangerous. With lung troubles ether is contraindicated. Children are often quite susceptible to the poisonous influence of chloroform, and he does not hold to the view that it is a safer anesthetic with them. It is less likely to produce kidney trouble, and he remarks that any anesthetics are unsafe in marked anemic conditions. With a large empyema encroaching on one side of the chest we should use caution with the anesthetics. A very small amount will usually suffice, but rectal work requires, perhaps, most anesthetic. To prevent the after-effects of vomiting and nausea he says use as little of the anesthetic as possible, and allow the patient to inhale the vapor of dilute acetic acid or vinegar before coming out from the anesthetic, and move him about as little as possible during and after the operation. Place the patient on the bed with the head only slightly raised. Wash out the stomach if much mucus has been swallowed and if vomiting has been prolonged, and withhold food after operation, and give nothing but hot thin liquid in small quantities; keep the temperature of the room uniform; turning the patient well on his side before coming out from under the anesthetic has been recommended to prevent swallowing of mucus and saliva, coughing is thus prevented and vomited matter is more easily expelled. The anesthetist should stay with the patient until there is no doubt of his coming out safely. The danger signs are sudden dilatation of the pupils, shallow, sighing respiration, absent, or irregular or intermittent pulse, sudden paleness or lividity. When these occur stop the anesthetic at once, stand the patient on his head, begin artificial respiration, if necessary, use hypodermics of strychnin and nitroglycerin, divulse the sphincter ani, give inhalation of ammonia or amyl nitrite, and see that the tongue has not fallen back so as to interfere with the free access of air to the lungs. Shock, which sometimes occurs in operation, must be treated with reference to its cause. There is very little gained by pumping strychnin and nitroglycerin into a patient who has lost a large amount of blood. Anesthetics and their administration should be added to every medical curriculum and every student have a practical training in this line.

142. **X-Rays.**—Beck uses the *x*-ray considerably as an after-treatment after surgical operations with good effect and gives some suggestions as to its employment. He would expose for five minutes at first and after a week for ten minutes. If, after a third exposure, two weeks after the first exposure, no reaction has been shown, the patient apparently is not liable to have an idiosyncrasy and may be irradiated every second or third day, and at last daily until intense reaction shows itself. During the tentative exposures the distance of the tube should be four inches; later it may be one inch only. In some cases he has seen it used in direct contact with no harm. In cases of malignant disease it is improper to use a shield as the influence of the rays is wanted to extend as much as possible. During the intervals he would use xeroform salve (1 to 10 lanolin).

155.—This article appeared in THE JOURNAL of August 30.

163.—See ¶105.

## FOREIGN.

Titles marked with an asterisk (*) are abstracted below. Clinical lectures and single case reports are omitted unless of exceptional general interest.

### British Medical Journal (London), September 20.

1 *A Discussion on Beri-beri. Patrick Manson, E. R. Rost, L. W. Sambon, Ronald Ross, and others.
2 Enteric Fever in Sierra Leone—Not Yet Endemic? F. Smith.
3 The Climate and Diseases of Bangkok. P. A. Nightingale.
4 *A Discussion on Dysentery. Andrew Duncan, W. J. Buchanan, Leonard Rogers, Patrick Manson, and others.
5 Sanitary Work in West Africa. M. Logan Taylor.
6 Heat Apoplexy. Edward Henderson.
7 The Prophylaxis of Sunstroke. Andrew Duncan.
8 *A Discussion on Yellow Fever. James Cantlie, G. C. Low, and others.
9 Malta Fever. P. W. Bassett-Smith.
10 Malta Fever in the Canaries. Brian Melland.
11 The Geographical Distribution of Malta Fever; and the Value of Splenic Enlargement as a Test of Malarial Incidence. James A. Hislop.
12 Kala-azar as an Analogous Disease to Malta Fever. Charles A. Bentley.
13 Filariasis in Sierra Leone. W. T. Prout.
14 Note on Trypanosoma Occurring in the Blood of Man. J. Everett Dutton.
15 A Preliminary Suggestion for the More Systematic Study of Typhocoloid Fever. Albert S. Grunbaum.

### The Lancet (London), September 20.

16 The Present Position of Chemical Physiology. W. D. Halliburton.
17 Acute Infantile Broncho-pneumonia (Broncho-pneumonitis). John L. Steven.
18 *Occlusion of the Lateral Sinus and Internal Jugular Vein an Essential Part of the Method Employed by Nature, and by the Surgeon in Imitation of Nature, for Arrest of Acute General Infection Having Its Origin Within the Temporal Bone. Charles A. Ballance.
19 A Note on Albinism, with Especial Reference to Its Racial Characteristics Among Melanesians and Polynesians. C. G. Seligman.
20 *Persistent Hereditary Edema of the Lower Limbs. H. D. Rolleston.
21 *Mucin and Malignancy: Facts and Theories. William Stuart-Low.
22 The Cancer Problem. W. V. Shaw.

### Presse Medicale (Paris), August 23 to September 13.

23 (No. 68.) L'Orthopédie. P. Villemin. Historical Sketch.
24 *Sterilization of Books. Barbe.—Désinfection des livres par les pulvérisations du formol du commerce.
25 (No. 69.) *Insuffisance hépatique aigue. L. Lavastine.
26 L'Arrhénal. Dans le traitement des fièvres palustres en Algérie. A. Cochez.—Dans la grossesse (pregnancy) compliquées de paludisme. Fontoynont.
27 (No. 70.) Etude graphique des mouvements respiratoires. Letulle and Pompilian.
28 De la broncho-pneumonie gangréneuse des pneumokonioses. G. Rosenthal.
29 *Traitement de l'hémorrhagie chirurgicale de l'amygdale. E. Escat.
30 Dosage of Mercurial Preparations. Barthélemy, Lafay and Lévy-Bing.—Dose efficace moyenne journalière de quelques injections mercurielles solubles.
31 (No. 71.) *L'urobilinurie. A. Gilbert and M. Herscher.
32 *Du moment de l'intervention chirurgicale dans les ictéres d'origine lithiasique. A. Coyon.
33 (No. 72.) *La tuberculose traumatique. E. Mosny.
34 (No. 73.) *Les lésions appendiculaires dans les autopsies banales. Tuffier and Marcland.
35 Etude historique sur l'exploration externe du tube digestif. L. MacAuliffe.
36 Quel est le traitement de choix de l'appendicite? Savariaud.
37 (No. 74.) Traitement des phlegmasies mammaires par la réfrigération. Bonnaire.
38 Chirurgie réparatrice du varicocèle. L. Longuet.
39 De la valeur comparée des médications thyroidiennes. Briquet.

### Revue de Chirurgie (Paris), September.

40 *Cas de désarticulation inter-ilio-abdominale. Procédé à lambeau interne (internal flap). Savariaud.

41 Abcès perigastrique et hépatique avec perforations stomacales par traumatisme. Operation. Guérison. A. Valence.
42 *Contribution à l'étude des fractures de l'astragale. L. Ombrédanne. (Commenced in August number.)
43 *De l'ectopie congenitale du rein (kidney). Considérations chirurgicales. X. Delore.

### Der Frauenarzt (Dresden), xvii, January to July.

44 (No. 1.) Zur Aetiologie der Hyperemesis gravidarum. C. Lederer.
45 Preparing for Obstetric Operations in Country Practice. Weber.—Vorbereitung auf geburtsh. Operationen auf dem Lande.
46 (No. 2.) *Uebernormale Fettansatz im Klimacterium. L. Furst.
47 Beobachtungen betreffend Yohimbin. Schalenkamp.
48 (No. 3.) Ueber eine neue Leibbinde (abdominal support). Freudenberg.
49 Goat's Milk. R. Stolle.—Ziegenmilch.
50 (Nos. 4 to 6.) Ueber Aetiologie und Behandlung der postpuerperalen Erkrankungen. J. Kalabin.
51 Reform Dress for Women. Freudenberg.—Zur Reform der Frauenkleidung.

### Muenchener Med. Wochenschrift, September 2 and 9.

52 (No. 35.) Ueber das Wesen des Diabetes. O. Hess.
53 Zur hämolytischen Wirkung des normalen Menschen-Serums. N. Hahn.
54 *Die pernasale Tubage. F. Kuhn.
55 *Metastases in the Bones in Case of Tumor of the Thyroid Gland. R. Wagner.—Zur Kenntniss der Knochenmetastasen bei Schilddrüsentumoren.
56 *Beitrag zur Gelatinbehandlung der Melaena neonatorum. E. Fuhrmann.
57 Ein neuer Bewegungs-Apparat. O. Vulpius.
58 Ueber ein einfaches Bakterien-Filter zur Filtration kleiner Flüssigkeits-Mengen. W. Silberschmidt (Zurich).
59 *New Means to Prevent and Cure Decubitus. Sträter.—Ein neues Mittel gegen D.
60 Beitrag zur unblutigen Phimosen-Behandlung. Orlipski.
61 Physician and Accident Insurance Laws. W. Müller.—Arzt und Unfallgetze.
62 Impaired Working Capacity. L. Hoeflmayr.—Teilweise und veränderte Arbeitsfähigkeit.
63 (No. 36.) Behavior of Certain Glucosides in Animal Body. A. Falck.—Ueber das Verhalten einiger Glukoside, sowie über die Entstehung gepaarter Glukuronsäuren im Tierkörper.
64 Influence of Levico Water on Metabolism. E. Schreiber.—Einfluss des Levico Wassers auf den Stoffwechsel.
65 Ipecac in Dysentery. J. Strasburger.—Beitrag zur Behandlung der Ruhr mit Radix Ipecacuanhæ.
66 *Das Heroinum hydrochloricum als Anaphrodisiacum. A. Strauss.
67 Comparative Tests of Commercial Preparations of Yeast. R. Rapp.—Die Dauerhefepräparate des Handels.
68 *Action of Atropin on the Intestines. O. Ostermaier.—Zur Darmwirkung des Atropins.
69 Zur Frage der Uterus-Ruptur in frühen Monaten der Gravidität. K. Kober.
70 Thirty-pound Lipoma. H. Pfeiffer.—Ein Riesenlipom.
71 Zur akuten Formalin-Vergiftung (Intoxication). A. Gerlach.
72 *Rumination in Man. L. R. Müller.
73 Bacteria That Store Nitrogen, and Their Significance in Agriculture. Jacobitz.—Ueber Stickstoff sammelnde Bakterien.
74 The Concentration Camp at Metebank. L. Hoenigsberger.—Das Konzentrationslager Merebank (Natal).
75 *The Belgian Circular Warning Against Venereal Disease.

### Wiener Klinik, xxviii, January to July.

76 (No. 1.) Treatment of Gonorrheal Urethritis in Men. M. von Zeissl.—Behandlung des männlichen Harnröhrentrippers.
77 (No. 2.) Achievements and Present State of Organotherapy. V. Korczynski.—Errungenschaften und gegenwärtiger Stand der Organotherapie.
78 (Nos. 4 and 5.) Treatment of Complications of Gonorrheal Urethritis in Men. M. v. Zeissl.—Die Complication des Harnröhrentrippers und ihre Behandlung.
79 (No. 6.) Value of Tuning Fork in Otologic Diagnosis. A. Bing.—Die otologische-diagnostische Verwerthung der Stimmgabel.
80 (Supplement Number.) Erkrankungen der Respirations-Organe der Thyreoidea und der Thymus. A. Monti (212 pages).

### Wiener Klin. Wochenschrift, August 7 to September 11.

81 (No. 32.) *Relations Between Structure and Function of the Spleen. K. Helly.—Wechselbeziehungen zwischen Bau und Function der Milz.
82 Bemerkenswerther Fall von Neurofibromatosis. C. Adrian.
83 Report of Six Cases of Premature Delivery by Aid of Knapp's Elastic Metal Bougie. A. Scheib.—Künstlicher Frühgeburt mittelst elastischer Metalbougie nach Knapp.
84 (No. 33.) Measurement of Blood Pressure in Man. S. Federn.—Ueber Blutdruckmessung am Menschen.
85 Ueber anreicherung (enriching) der Tuberkelbacillen im Sputum (nach Hesse). R. Königstein.
86 (No. 34.) *Zur Technik der Nearthrosenbildung bei ankylosirten Gelenken. D. Pupovac.
87 Beitrag zur Casuistik der Syringomyelie und über die bei dieser Krankheit vorkommenden Hautstörungen (cutaneous disturbances). P. Fleger. (Commenced in No. 33.)
88 Ueber die Reaction des Prostatasecretes bei chronischer Prostatitis. Pezzoli and Lohnstein.
89 (No. 35.) Diagram of Movements of Muscles of the Eyeball. Elschnig.—Diagramm der Wirkungweise der Bewegungsmuskeln des Augapfels.
90 (No. 36.) Fall von Sympathicusresection gegen Glaukom. K. Hoor.
91 *Ueber postoperatives Irresein (Insanity). A. Pilcz.
92 *Klinik der Esophagoskopie. L. Harmer. (Commenced in No. 35.)
93 *Significance of the Optic Thalamus. M. Probst.—Ueber die Bedeutung des Sehhügels.
94 Obstetric Paralysis of the Arm. A. Schuller.—3 Fälle von Entbindungslähmung am Arme. Ueber die Beziehung dieser Lähmungsform zum angeborenen Schiefhals.
95 Prophylaxe der venerischen Krankheiten durch Errichtung von Heil- Behandlungs- und Pflegestätten. E. Finger.—Address at Preventive Conference.

### Gazzetta degli Ospedali (Milan), August 7 to September 7.

96 (No. 90.) *Dell' uso della Piridina nella pertussis. M. V. Cacchiole.
97 *Di un nuovo metodo di cura della parotite epidemica. E. Grande.
98 *Cura radicale del Ischuria da ipertrofia prostatica, mediante la cauterizzazione della prostata della via rettale. A. Negretto (Lodi).
99 L'ipocloruria nelle malattie acute e croniche. G. Campanella.
100 Determinazione dell'acido fosforico in clinica. E. Pittarelli.
101 (No. 92.) Sulla plastica col grande omentum. A. Soraci.
102 (No. 93.) Miners' Disease. C. Momo.—La malattia delle mine.
103 Altri 6 casi di febre miliare fulminante. C. Ernesto.
104 *Ecchymosis on Dorsum of Foot After Fall on the Feet. T. Fiori.—Macchia ecch. del dorso del piede da caduta, etc.
105 (No. 96.) *Considerazioni sopra 10 splenectomie per splenomegalia malarica associata ad ectopia. R. Schwarz.
106 *Sull' operazione di Talma. F. Carini.
107 (No. 99.) Contributo alla prova di Widal nella febbre tifoide. A. Migliorato.
108 *Contributo allo studio degli aneurismi. B. Romano.
109 Del "reumatismo blenorragico." V. Utili.
110 Contributo alla epidemiologia e alla profilassi della malaria in alcune zone dell' Italia Meridionale. G. Gliblas.
111 (No. 102.) *Contributo allo studio della tuberculosi latente delle tonsille e delle vegetazioni adenoidi. C. Tarchetti.
112 *Sul valore della citodiagnosi. Ibid.
113 La peste bubbonica. M. Salvatore.
114 Mastite e allattamento (lactation). E. Piperno.
115 Negative Results of Blister Test. Germani.—Sulla prova del vescicatorio.

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1. **Beri-Beri.**—In this article Manson takes the stand that, while beri-beri is clinically a multiple peripheral neuritis and possibly confounded with many other forms of peripheral neuritis in the tropics, it is the result of a specific toxin which is produced by a living germ, although this has not yet been satisfactorily ascertained by research. One proof of this is that the disease can be introduced into a virgin country and there spread. The cause is capable of being transported and of multiplying, and there are many instances of this fact, some of which he gives. It operates in some culture medium and that this is located outside the human body is shown by the fact that no germ can be detected in the victims of the disease. He holds, however, that it does not enter the human body in food and gives in support of this view the experience in certain Indian jails and hospitals. In this respect he is not in accordance with certain views that have been held, but he feels confident that he is correct. He also maintains that it is not conveyed in drinking water. In two institutions side by side supplied from the same source, one may have the disease and the other be exempt. Unfortunately, we have nothing yet to show what the toxin is or what germ produces it or how it gains access to the body. Whoever succeeds in solving these problems will confer an immense benefit on the multitude of his fellow men.

Rost's views were abstracted in a recent number of this journal from his article in the *Indian Medical Gazette*.

Sambon, while not believing in the rice theory of beri-beri, holds that food may become a medium of infection. He disagrees somewhat with Dr. Manson's views and holds that the specific agent of the disease lives within the patient's body and attacks the peripheral nerves, basing this assumption on the clinical symptoms and the anatomic data of the disease. While we do not know the primary cause there are many important epidemiologic facts ascertained, and he suggests on the experience so far collected as provisional measures for its prevention that: "1. Men who have recently suffered from beri-beri should not be allowed to join coolie gangs, because they would most probably suffer from a relapse of the disease, and, possibly, become a source of infection to others. 2. Patients suffering from beri-beri should be isolated in beri-beri countries, because, under certain as yet undetermined conditions, they are undoubtedly a cause of further infection. 3. Open wounds, ulcers and abrasions of any kind should be most carefully cleansed and dressed in those who are obliged to associate with beri-beri patients. 4. The diet supplied to coolie gangs and to inmates of collective dwellings should be varied

and rich in nitrogenous ingredients. The rice should be of good quality, recently decorticated, properly stored, carefully washed and thoroughly cooked. Whatever may be the cause of beri-beri, we can not deny that diet seems to have a potent influence on its prevalence. Takaki's dietetic reforms in the Japanese navy to overcome beri-beri have proved as great a triumph as those introduced by Blane into the English navy in 1795 to combat scurvy—a disease in many ways comparable to beri-beri."

Ross reports some instances of the finding of arsenic in the hair of beri-beri subjects. In all the cases they were in the early stage of the disease, while the negative cases were largely of over one month's duration. The presence of arsenic in these cases may be a mere coincidence, but still he thinks it may point to a real connection between the poison and the disorder, which is very much like chronic arsenical poisoning.

4. **Dysentery.**—Duncan recognizes the fact that dysentery may present itself in several different types with different causes. He opposes the view to some extent that the amebic type is the typical tropical dysentery; in fact, in India, he holds, the ameba has very little to do with the disease, but is merely a concomitant. From his study of the affection he deduces the following as regards the prognosis of the disorder: "In the acute forms, (*a*) as regards the stools, a good result is the rule where the blood and mucus disappear and the ordinary stools re-establish themselves; of unfavorable prognosis are: 1, where the stools consist of a blackish-red or blackish fluid, with a horribly putrescent odor, and bits of gangrenous tissue; I have never seen a patient who passed this stool recover; 2, where during the course of the disease fluid fecal matter is from time to time passed, the import is rather unfavorable, inasmuch as the disease is liable to be extensive, affecting the upper part of the large, as well as even the small intestine; 3, Sir Joseph Fayrer also states that the prognosis is very bad where porridge-like stools are passed with a very fetid odor, without mucus or blood. (*b*) As regards the general symptoms, the gravity of the case is to be judged from the aspect of the patient. Where the features become shrunken, with the supervention of a cold sweat, the cessation of abdominal pain, and the exhalation of a fetid odor from the body, the worst is to be feared. Persons over 50 also are handicapped by their age; other unfavorable symptoms are hiccough, sordes, suppression of urine, with involuntary passage of the contents of the bowel. In chronic dysentery the prognosis is by most authors considered unfavorable; but Dr. Stephen Ward, formerly physician to the Dreadnought Hospital, as the result of his large experience, stated that recovery took place in most of the cases where they have been properly treated. This result was the usual one in my experience while resident at this hospital. Lastly, in scorbutic dysentery the prognosis is extremely bad, unless the scorbutic element be recognized." For the treatment he finds ipecac one of the reliable agents and where it is not tolerated an excellent substitute is found in cinnamon in dram doses in a bolus night and morning. The saline treatment he has had no experience with in India, but hears it well spoken of. In other parts of the world, South Africa and elsewhere, the experience has been somewhat different, ipecac being less reliable. This he holds as an argument that the diseases are not the same. For chronic dysentery he has employed two methods, one by bismuth with Dover's powder, 20 grains of the former to ¼ gr. of the latter. Secondly, moderate doses of castor oil, also with opium suppositories are used, and the third plan used by the late Dr. Ralfe was the administration of 20 minims of oil of turpentine, which he was inclined to consider best of all.

Buchanan finds the dysentery of the India prisons almost altogether bacillary and dwells particularly on its seasonal character, its communicability and the need of early recognition and prompt and effectual treatment. Hospital treatment is the most successful; outpatient treatment is less advantageous. The treatment which he seems to favor most is sodium sulphate in cinnamon or fennel water, four, five or six times daily. He has notes of over 1100 cases thus treated with only nine deaths.

The relation of dysentery to liver abscess as shown by experience in the Medical College of Calcutta is discussed by Rogers. The first point he mentions is the relation of the ameba to tropical liver abscess, and he finds that dysentery has been precedent in a very large proportion of cases, and can not be excluded in the remainder and that the dysentery of the tropic or amebic liver abscess is of the amebic variety. In fact, dysentery is constantly or almost constantly associated with tropical abscess of the liver, and as he seems to believe directly related. On studying the statistics he finds there is no season of special prevalence of the abscess, which is in accord with the theory that it has a relation with the amebic dysentery, which, unlike the catarrhal form, has no seasonal incidence. Alcoholism is a very common thing in these cases and seems to be an important predisposing cause. He reviews the symptomatology and pathology in some detail and calls attention particularly to the value of leucocytosis in the diagnosis and the action of quinin on the ameba. His conclusions are summed up as follows: "1. The ameba is constantly found in an active condition in the wall of tropical abscess of the liver, although frequently absent from the pus in its cavity. The ameba is the only organism constantly found in such abscesses. 2. Staphylococci and other pyogenic bacteria are absent from the pus in the great majority of cases when the abscess is first opened. 3. In cases of which a complete record is available there is either a history of dysentery or lesions of this disease are found postmortem in over 90 per cent. of the cases, and it can not be certainly excluded in the remainder. 4. The dysentery precedes the liver abscess or lesions in the large bowel of an antecedent date, and are found postmortem in 95 per cent. of cases. 5. The form of bowel disease associated with the large tropical or amebic abscess of the liver is amebic dysentery. 6. Severe sloughing forms of catarrhal dysentery may be associated with small multiple pyemic abscesses, which is a totally distinct condition from tropical or amebic abscess, and is very rarely recognized during life. 7. Quinin solutions rapidly destroy the ameba, and may be used with advantage in washing out liver abscesses after they have been opened. They are also worthy of a trial as injections after aspiration of the pus as a possible curative measure, especially in such cases as are found to be free from the ordinary pyogenic organisms."

8. **Yellow Fever.**—The results of the American Yellow Fever Commission are reviewed by Cantlie, who also notices several other diseases which seem to be allied to yellow fever, such as Weil's disease, acute yellow atrophy of the liver, bilious remittent, bilious typhoid and hemoglobinuric fever.

From a comparison of pernicious malaria and yellow fever, Low concludes that it is of extreme importance to examine the blood carefully when called on to decide whether the case is one or the other. At the commencement of the epidemic, when there is a doubt as to the nature of the disease, the later progress of the epidemic would probably clear up the diagnosis of yellow fever. The increase of large mononuclear leucocytes in the blood would form a diagnostic point of considerable importance in fever or malaria, though how reliable this may be is not quite fully ascertained.

18. **Infection from Disease of Temporal Bone.**—The paper by Ballance considers the general subject of infection of the cerebral sinuses from disease of the temporal bones and his conclusions are that the surgeon, from his examination of the case, must come to a fair idea as to the patient's condition, whether it be an acute systemic infection or a systemic disturbance depending on local processes. If we are in doubt the matter must be cleared up by careful observation as early as possible during the progress of the operation on the temporal bone. The operation on the jugular vein should be undertaken: 1, in acute pyemia and acute septicemia whether the sinus is clotted or filled with fluid blood, and 2, where the sinus wall is gangrenous or its contents are putrefying, unless it is perfectly clear that on both sides of the area of inflammation of the lumen of the sinus is completely blocked by non-infected thrombi. 3. If it is proved or even suspected that the blood in the jugular vein is in part or wholly clotted, and

4, if the jugular vein is thrombosed. It is seen that not only general systemic infection, but certain local conditions demand operation. Having dealt with the vein the operator returns to the sinus region and removes bone so as to expose the sinus toward the torcular for a distance of at least three-quarters of an inch beyond the area of inflammatory change and the same treatment is adopted on the other side of the inflamed area, the bone being removed in some cases and probably better in all as far as the bulb, so that the whole area of possible infection of sinus and vein is exposed in one continuous wound. If one continuous wound is not made in lateral sinus pyemia the dangerous area of the bulb is not laid open and the presence of even a small particle of putrefying clot may determine an extension of the infective clot along the inferior petrosal sinus to the cavernous sinus. It is impossible to deal with the sinus as with the vein by removal, and, therefore, the obvious proceeding is to slit up the sinus, if necessary from torcular to bulb so that the whole area of infected inflammation may be exposed and treated. In the selection of cases is where the judgment of surgeons must come in play. It matters not whether the condition has had its origin in acute or chronic inflammation. The proper surgical treatment by free incision or ablation is not only not dangerous, but beneficial and curative. Rapidity and skill of execution is as urgently needed as in general septic peritonitis from perforation or hemorrhage from rupture of the spleen or rupture of tubal pregnancy.

20. **Hereditary Edema of the Lower Limbs.**—Rolleston reports the case of a brother and sister both subject to a peculiar form of edema of the legs which was persistent as long as they led an ordinary life, and was more marked after exercise or a warm bath, but disappeared after rest in bed for a few days. It was only troublesome from the weight and size of the legs, there being no pain. The mother had suffered for 35 years from the same condition. There was no history or trace of specific infection, and no evidence of hemophilia. When the limbs were kept warm the skin was normal in color, but the circulation was feeble, pressure leaving an anemic area for a longer time than normally. The edematous skin pitted fairly readily, and was distinctly cold to the touch. There was no apparent structural change or thickening even in the mother, nor was there tenderness on pressure. There was no puffiness of the face, hands or any part of the body except the lower extremities, and no recognized cause for the edema in any of the three patients. The heart was normal and there was no anemia, but evidence of what was properly called a feeble circulation, and at birth both were blue babies and were always subject to chilblains. He suggests whether there may have been some hereditary defect or peculiarity of the small blood vessels allowing extensive transudation to occur on very slight provocation in these cases.

21. **Mucin and Malignancy.**—The point made in Stuart-Low's paper is that it is possible that mucin has a counteraction against malignant disease. He calls attention to the fact that cancer is seldom met with in any situation along the mucous membrane of the small intestine and lungs, both of which have an ample supply of mucin secretion. The same is true of the urinary tract, while in the mammæ where there is no mucin whatever it is frequent, and in the uterus cancer most generally affects the portion that is least supplied with mucous glands. Frequent pregnancy is a strong predisposing cause, and it produces a hypomyxiatous condition in the hypertrophic uterus at the menopause. He remarks also that in the 15 cases of cancer which he tabulates, as observed during the last few months, nearly all show excessive tobacco use and also the consumption of a large quantity of salt, both of which tend directly to bring about the diminution of mucin. He has tried mucin in malignant disease in six of these cases, all in the advanced stages before resorting to its use, with improvement in all, though none have been thoroughly cured. Of course tobacco and salt were prohibited.

24. **Disinfection of Books with Formalin Spray.**—Barbe found that books disinfected with the fumes of formic aldehyd were still able to infect guinea-pigs with tubercle bacilli previously deposited on certain leaves. He then modified his procedure and found that it was possible to thoroughly disinfect books by the following method: The book was suspended from the cover of an airtight box by a pair of forceps holding the cover opened backward, thus allowing the leaves to spread like a fan. He then sprayed it from below with an ordinary Richardson atomizer, using the same amount of formalin, that is, 5 gm., as the box was about a yard square. The nozzle of the atomizer was inserted in a hole in the bottom of the box. As soon as the fluid had all been sprayed into the box, the hole was plugged and the box left undisturbed for twenty-four hours. No infection resulted in guinea-pigs inoculated with tubercle bacilli that had been deposited on the leaves as in the previous experiments.

25. **Acute Insufficiency of the Liver.**—Six cases are described and a number of others are reviewed. The syndrome occurred in the course of typhoid fever or pneumonia, and is so unusual that some were diagnosed as measles and others peritonitis from perforation. The principal symptoms are the subnormal temperature, the green vomiting and the erythema. Besides these there are usually urobilinuria, pale diarrhea, painful tumefaction of the liver, hemorrhages from the mucosæ, nausea, hiccough, delirium, hallucinations, nocturnal agitation and dread of death. The autopsies of each case showed the liver in such an advanced stage of granular-fatty degeneration that the tissue looked like lace.

29. **Treatment of Hemorrhage in Operations on the Tonsils.**—Escat has been successful in arresting threatening hemorrhage by suturing the anterior and posterior pillars together with a curved needle after removal of the tonsil. In case this proves insufficient he introduces a wad of cotton the shape and size of the little finger, working it beneath the two stitches in the pillars. The cotton can be impregnated with suprarenal extract, hydrogen dioxid or a 10 per cent. solution of antipyrin or a 2 per cent. solution of ferropyrin. If adrenalin hydrochlorate is used, the 1 per 5000 solution is strong enough, and none should be allowed to be swallowed. If these measures fail he inserts a laryngeal tube, lengthened by a tube brought out through the mouth. The patient may be fed through a rubber tube introduced in the esophagus. The space around the two tubes should be thoroughly packed with gauze.

31. **Urobilinuria.**—Gilbert has established the almost constant absence of urobilin in the blood in severe cases of urobilinuria. Also that urobilinuria does not signify insufficiency of the liver, as previously supposed, but merely cholemia. The urobilin is of renal origin, and is a sign that the bile pigments are circulating in the blood. It may occur with or without icterus and choluria.

32. **Time to Intervene in Icterus Due to Calculi.**—Coyon agrees with Mongour that the way to determine the proper time for intervention is by daily percussion of the liver. When this organ is hypertrophied in such cases it indicates that it is striving to defend itself. When it commences to retrogress, accompanied by polyuria and azoturia, the process is evidently on the decline and recovery is near. On the other hand, if the liver commences to retrogress without these other symptoms, it is a sign that the organ is unequal to its task and is giving up the struggle. This is the moment for surgical intervention as the patient can not recover if left to his own resources. If systematic percussion has not been practiced, the presence of abnormal bile pigments in the serum and urine will prove a valuable aid. When the urine contains the normal pigments, it is unnecessary to examine the serum, but in the opposite case, he draws 10 to 20 gm. of blood from a vein and sets it aside in slanting test tubes until completely coagulated, when he examines the serum chemically and with the spectroscope. If the pigments in the serum are modified the conclusion is inevitable that the liver cells are functioning abnormally and the obstacle should be removed. Chills and fever, indicating infection, are not an indication for operating in every case. Many primary and secondary infections of the liver may heal spontaneously or under medical treatment. The changes in the size of the liver and in its biligenic function are the main points in the prognosis.

33. **Traumatic Tuberculosis.**—Mosny believes that a traumatism which arouses a latent tuberculous lesion inflicts almost as much of an injury on the victim as if a healthy person had been rendered tuberculous by the traumatism. The French courts have allowed industrial damages of 1/5 to 2/3 of the victim's previous wages in such cases. Clinical experience seems to show that a traumatism remote from the primary tubercular focus does not cause a local tuberculosis unless there was a previous latent tubercular lesion at the point. This assumption is confirmed by the fact that a broken bone usually heals in a consumptive without any tubercular lesion developing at the point. Traumatism affecting the thorax accelerates the course of established pulmonary tuberculosis. Hemoptysis, pneumonia, broncho-pneumonia and pleurisy following a traumatism of the thorax in subjects hitherto considered healthy, are manifestations of tubercle bacillus infection from the start. The traumatism reveals the existence of some latent focus. Lerefait of Rouen found some latent, healed tubercular focus in every one of 300 cadavers of elderly people. Traumatic pleurisy, etc., terminating in pulmonary consumption, is in reality merely the arousing of a latent tubercular focus, not the secondary tubercular infection of a simple inflammation of the lung. The hemoptysis which so frequently follows the traumatism is in itself witness to the bacillary nature of the affection.

34. **Lesions in Appendix at Autopsies.**—Tuffier illustrates a number of cases to support his assertion that lesions of the appendix are frequent which yet do not come under the head of appendicitis. The symptoms caused by them are not recognized during life. Besides true surgical appendicitis there must be other forms, more or less severe lesions, revealed by the autopsy alone; adhesions, congenital anomalies, atrophy, hypertrophy and obliteration of the appendix. In many instances the appendix appeared to be sound to the eye but the microscope disclosed evidences of chronic inflammation. The peritoneum around the appendix was found intact in only 47 out of 146 cadavers investigated from this point of view. In another series of 60 autopsies periappendicitis was manifest in 22, and in 13 it coincided with partial or total obliteration of the cavity of the appendix. In 15 others the peritoneum was intact, but the appendix was obliterated or inflamed inside. He concludes from these and other facts which he cites, that the appendix is almost invariably chronically inflamed. More or less severe acute attacks occur accompanied by perilymphangitis, and hence defensive reaction on the part of the peritoneum. If the attack is mild, the adhesions thrown up protect the organ and the attack subsides, leaving scarcely any traces. These acute attacks recur with more or less frequency and the adhesions become more and more numerous, until finally they may present the appearance left after a surgical appendicitis although the individual in question may never have had his attention called to the organ by any symptoms. [Riedel's recent article in the *Berliner klin. Wochenschrift* reaches nearly the same conclusions after microscopic examination of 313 inflamed appendices. Acute inflammation of the appendix, he states, can develop only when the organ has long been chronically inflamed. There is no dulness over it so long as it is non-adherent and adhesion is by no means the inevitable consequence of a serous, purulent or even a fetid inflammatory process in the appendix. As long as the appendix floats freely dulness may be absent, and the diagnosis uncertain.—ED.]

40. **Internal Flap Method of Inter-Ilio-Abdominal Disarticulation.**—Savariaud describes a case of an hour-glass shaped tumor of the great sciatic notch, partly in and partly outside of the pelvis. Such a tumor simulates an osteosarcoma of the pelvis and can be differentiated only by radiography in some cases. When it invades the vessels and nerves of the extremity, inter-ilio-abdominal disarticulation may become necessary, and the best method is that which provides a long flap on the inside of the thigh, to substitute the soft parts of the buttocks destroyed by the tumor or suppuration. When a more conservative operation is possible, the example of Kocher and Roux must be born in mind as they have each resected the entire ilium. They not only cured their patients but the latter are able to walk without support and even stand on the operated limb, swinging the other foot. A thick fibrous membrane must have developed between the intra- and extra-pelvic muscular planes. In the personal case described the seven-year-old child died soon after the inter-ilio-abdominal disarticulation, probably from a combination of factors, the length of the operation, loss of blood, nervous shock from section of the crural, obturator and sciatic nerves, escape of cerebrospinal fluid, etc. But the case illustrates the advantages of this operation for such cases, although naturally as the last resort. He reviews 7 cases of disarticulation for an osteosarcoma with 3 recoveries and 2 for coxalgia with 1 recovery.

42. **Fractures of Astragalus.**—Ombrédanne concludes his illustrated study of this subject with an explanation of the various modes of fracture. The symptoms of a fracture of the body and neck of the astragalus are the dislocation *en masse* of the foot inwards, with or without inward reversal of the sole. This deformation is almost pathognomonic if the malleoli are intact. Fracture of the posterior tubercles is characterized by persistent impotence of the member, pternalgia or achillodynia. A fracture of the body or neck of the astragalus requires its entire removal at once. If the posterior tubercles are fractured, confirmed by radiography, and entailing inveterate achillodynia, extirpation of the torn out fragment is advisable. Under expectant treatment fractures of the astragalus lead to ankylosis or at least absolute impossibility to walk (Cases of Mollière, Monod and others). On the other hand, the results after astragalectomy are absolutely perfect (Russell, Hancock, Desfosses and others). There does not seem to be any advantage in leaving the head in place. The indications for astragalectomy are even more imperative in case of compound fractures.

43. **Congenital Ectopia of the Kidney.**—Delore remarks that an ectopic kidney is not lumbar but retroperitoneal and should be extirpated like a tumor in the mesentery or pancreas, by a laparotomy rather than through a lumbar incision. An ectopic kidney protruding into the vagina has been occasionally ablated by an accoucheur during delivery, but the size of the kidney may forbid it, its detachment is not easy, there may be more than one pedicle and the course of the vessels is almost certain to be abnormal and hemostasis difficult. Laparotomy is preferable even for these cases, aside from some urgent necessity during delivery. In a personal case reported abdominal nephrectomy was followed by drainage of the cavity, tamponing with a counter-opening at the lowest lumbar point. Post-operative broncho-pulmonary complications have been banished from his clinic since he has made a practice of this measure in all operations for the detaching of organs. At the autopsy of another case, not operated on, and diagnosed during life as intermittent hydronephrosis, the ectopic right kidney was found fastened to the anterior surface of the spine, near the second and third lumbar vertebræ. It weighed 90 gm., had two renal arteries and one renal vein. The ureter appeared to be normal. The symptoms were intermittent attacks of pain, probably due to recurring congestion and digestive disturbances, which were marked in several cases on record, including his personal case. They were so severe as to suggest cancer of the stomach, but they all vanished after ablation of the kidney. Palpation shows the rather hard consistency of the ectopic organ, its fixity, and the sensibility more acute than in case of a fibrous, cystic or fatty tumor. Pressure on it may sometimes cause radiating pains suggesting those of nephritic colic. The kidney in such cases is usually deformed and it is useless to seek for its normal shape. In some cases there has been fluctuation; in others pulsation suggested an aneurism. In some the ectopic kidney simulated a parenchymatous salpingitis. The lower end of the kidney formed a fixed, hard, sensitive, spindle-shaped tumor, extending down toward the left vaginal cul-de-sac, separated from the cervix of the uterus by a groove. It was diagnosed as a hydrosalpinx, an appendicular abscess, a tubercular mesenteric ganglion and a sarcoma of an ectopic testicle by the various writers. If the possibility of a congenital ectopic kidney is borne in mind, it

will probably be correctly diagnosed more frequently. It is usually mistaken for a movable kidney. Radiography, percussion after injection of gas, examination of the urine, tests of the permeability of the kidneys and even catheterization of the ureters are not always able to definitely decide the question. In the personal case described the ectopic kidney was detached through an abdominal incision and the condition improved for eighteen months, after which the previous pains and digestive disturbances recurred, compelling nephrectomy.

46. **Obesity Developing at Menopause.**—Furst has been very successful in keeping patients with a tendency to obesity in good health and moderate proportions by the following régime. About 100 gm. of Hunyadi Janos water before breakfast and on retiring, followed by ten minutes of self massage. Ten minutes are devoted to gymnastic exercises once or twice during the day. Fluids in moderate amounts, diet mostly vegetable, excluding potatoes and nuts, and the amount of sugar restricted. This régime must be kept up indefinitely, with the patient weighed weekly to determine the gain or loss.

54. **Pernasal Intubation.**—Kuhn's peroral tubage has been described in these columns. The tube extends from the outside into the larynx through the mouth, with a metal cap to protect it as it passes between the teeth. It has been found extremely useful, and he now announces that the same principle can be applied to intubation through the nose. A metal tube is inserted through a nostril into the larynx with very little discomfort. It has all the advantages of the mouth or peroral tube while respiration proceeds more naturally, and the curve of the tube is less acute and consequently there is less friction for the entering air. The mouth is left entirely free, and the tube can be fastened more easily. In operations on the mouth the throat can be tamponed and thus the field kept absolutely clean, while respiration proceeds naturally, and an anesthetic can be given more easily. It is impossible to conceive, he says, of a more convenient and extensive means of access to the mouth and throat, free from dread of asphyxia, aspiration, spasmodic efforts to vomit or actual vomiting. The nasal tube can be left in place after the intervention for several hours, and it is even possible to take liquid food with it still in the nose and throat. It prevents reflexes from the upper-air passages and keeps them open. The chloroform mask can be dispensed with and the narcosis can be rendered more profound at any moment with comparatively small amounts of chloroform and without interrupting the operator.

55. **Bone Metastases from Thyroid Tumor.**—Wagner describes a spindle-celled sarcoma that developed in an old parenchymatous struma. It made irruption early into the blood and a metastasis developed in the neck of the femur, which appeared to be the primary lesion as the thyroid tumor had caused no noticeable symptoms. He warns that in case of a malignant tumor in the skeleton the thyroid gland should be investigated as the possible primary source.

56. **Gelatin in Melena Neonatorum.**—The melena was idiopathic and typical in each of the three cases reported by Fuhrmann. All were treated with injection of 40 to 50 c.c. of a 2 per cent. solution of gelatin. In one the treatment was instituted late and the child died. The others promptly recovered.

59. **New Means to Prevent and Cure Decubitus.**—Sträter remarks that the ring cushions and other devices to protect a decubitus do more harm than good if the patient moves about on them, as the sore is brought against the edge. He avoids this by using a protecting pad of felt with glue on one side. A hole is cut out of it to correspond to the sore and the pad is moistened and applied to the skin, to which it sticks permanently as long as desired. Another advantage is that it does not incommode the patient like a thick cushion to which he is unaccustomed. He has used it in 40 cases and always with the most satisfactory results and no inconveniences of any kind. The sore usually heals as soon as all mechanical irritation is removed.

66. **Heroin as an Anaphrodisiac.**—Strauss has found that heroin in 1 cg. doses every evening has a remarkable effect in putting an end to nightly pollutions. It also cured cases of sexual neurasthenia, although the effect was less prompt than in the former category. It also proved beneficial in preventing painful erections in the course of inflammatory processes or after operations. There were no by-effects from its use, not even the constipation that follows morphin. It can be administered as a powder by the mouth or in the form of a suppository.

68. **Action of Atropin on the Intestines.**—Ostermaier states that only 6 failures have been reported out of 45 cases of ileus treated with atropin. Reviewing his own and the experience of others he has become convinced that the proper mode of administering it is to commence with 1 or 2 mg. and continue with 1.5 mg. at brief intervals, possibly thirty minutes, until the desired effect on the intestines is obtained or symptoms of intoxication appear. He ranks it with iodin, mercury and quinin as one of the most important drugs at our command, but explicitly warns that it substitutes taxis, not herniotomy, in case of external incarceration. In case of ileus it substitutes treatment with opium, but not operative intervention, and the latter should never be postponed for more than a few hours unless forbidden by other reasons.

72. **Rumination in Man.**—We recently listed in our Index Müller's article describing a family in which 3 members were "ruminants." The article was widely copied in the lay press throughout Germany, and in consequence the author has received numerous letters describing similar cases in the writers' experience. Rumination, it appears, is much more common than usually supposed. The subjects do not consult a physician and strive to conceal their "bad habit" from those around them. The writers remarked that they had found the best means to conquer it is to eat very slowly, thoroughly masticate the food, and control with the will as far as possible the regurgitation of the food. Müller does not consider it a morbid phenomenon.

75. **The Belgian Circular Warning Against Venereal Disease.**—The Belgian government has issued a pamphlet of practical instructions "for the use of officials and of the public to prevent the appearance of transmissible diseases and to combat their dissemination." The chapter in regard to venereal diseases is considered by the Germans a most important progress in the crusade against venereal disease. It demonstrates that it is possible to throw the light of science into the remotest dark corners of this matter without offending the public ideas of morality. Syphilis and gonorrhea are each considered separately and their dangers, the modes of contagion, the necessity for treatment and the possible consequences from its neglect are portrayed in simple, forcible language, especially emphasizing the dangers of prostitution by minors. It is the first attempt of the kind on the part of any government, as Belgium was also the first to organize an international preventive congress.

81. **Relations Between Spleen Structure and Function.**—Helly is assistant superintendent of the Institute of Anatomy at Vienna. He asserts that the spleen possesses all the properties which we consider the appanage of lymph glands, but this, of course, does not exclude the possibility that it may possess still other yet undemonstrated properties. Every lymph gland has a certain circumscribed region in its charge. We thus speak of certain "regional" lymph glands, as for instance, the inguinal, axillary or retrobronchial glands. The spleen has likewise its charge, but in this case it is the entire circulating blood. As we usually attribute several lymph glands to an organ, so the spleen shares with the liver and bone marrow this supervision of the blood. Lymph glands are involved in affections of the organ under their control or of other glands in their "region," and in the same way the spleen is liable to share in any morbid process affecting the liver or bone marrow. He concludes that the spleen is a lymph gland, and in fact a "regional" lymph gland for supervision, not of an organ, but of the blood. This fundamental idea explains its functional manifestations, its task of supplying leucocytes and of protecting and purifying the blood from foreign bodies and other

things that might harm it, among which should be classed red corpuscles that have lost their functional capacity.

86. **New Joint for Ankylosed Elbow.**—Pupovac tried to restore normal function to an ankylosed elbow, a sequel of gonorrheal arthritis, by dividing and mobilizing the parts of the joint and inserting a thin sheet of "magnalium" fastened to the bones with catgut. The metal was gradually absorbed and a radiogram eight months later failed to disclose any trace of it. The functional result attained was satisfactory, but would have been better if the patient had consented to the desired after-treatment. The interposition of the metal plate allows time for active and passive exercise of the mobilized joint and muscles after the traumatism of the intervention has healed.

91. **Post-Operative Mental Disturbances.**—Pilcz reviews a four column list of publications on this subject. He thinks that the coprostasis intentionally induced after abdominal operations is a very important factor in the production of post-operative insanity. This explains the comparative frequency of mental complications after herniotomies and gynecic operations. Other factors are intoxication from preceding medication or from the local disinfectants, and, especially, dread of the operation. He witnessed himself an instructive case of this kind. A young woman was to have been operated on for stenosis of the intestines and spent the day in a private institution expecting the operation. It was constantly deferred on account of external reasons, and finally postponed until the next day and then again from the absence of the surgeon. The same day the patient exhibited symptoms of a transient psychosis of the type of confusional delirium, terminating in twenty-four hours with amnesia. If the operation had been performed which she had been anticipating the case would have gone on record as a post-operative psychosis. There is scarcely any kind of surgical intervention which has not been followed by a psychosis in some case, but the majority occur after herniotomies, operations on the female genitalia or on the eyes. Out of 320 cases which he has collected, 128 were gynecologic, 64 on the eyes, 24 herniotomies, 21 on the male genitalia, 54 various operations, and in 29 no details were given. The mere introduction of a vaginal speculum, the extraction of a tooth, opening an abscess, circumcision of a child, have been followed by a psychosis in at least one instance each. The prognosis is usually favorable aside from actual senile dementia. The French authors urge that the best means of preventing post-operative psychoses is not to operate on the predisposed unless in urgent conditions. Energetic measures against coprostasis should not be neglected in treatment. The danger of attempting a sham operation to relieve some fixed idea is well illustrated by a case described by Picqué. A woman of 34 clamored for an operation on account of an imaginary severe abdominal affection. A surgeon incised the skin under chloroform, making a sham laparotomy. The patient's sufferings were increased afterward. She claimed that the operation had been incorrectly performed and that the uterus was rolling around in the abdomen. Another surgeon performed vaginal hysterectomy, which was followed by still further aggravation of her abdominal ailments, and a third surgeon was found for a laparotomy. Her condition grew constantly worse and she was finally taken to an asylum, where systematic treatment by hypnosis resulted in a cure.

92. **Esophagoscopy in the Clinic.**—Harmer reports 50 cases of foreign bodies or morbid processes in the esophagus diagnosed at Chiari's clinic by the aid of esophagoscopy. In the overwhelming majority the measure proved of great value and simple of execution. In only 4 out of the total of 50 cases was a positive diagnosis impossible.

93. **Significance of the Optic Thalamus.**—Probst concludes from his research that the optic thalamus has a manifold function. It can not be designated as the organ of this or that activity as various authors have attempted to define it, but it presides over the most varied functions. It can be regarded as the main switchboard between the periphery and the cerebral cortex, where connection is made between the most widely diverse sensations and impressions, both central and peripheral.

96. **Value of Pyridin in Pertussis.**—Mya attributes great importance to local disinfectants in the treatment of whooping cough. He found that the disease was rapidly cured in three cases by endolaryngeal injection of a 5 per cent. solution of menthol. The disadvantages of this method, however, preclude its general use, and he has since accomplished the same or even better results with pyridin. Twice a day 4 or 5 gm. of pyridin are poured on a plate kept at the foot of the bed. The fumes of the pyridin have an unmistakable inhibiting action on the development of bacteria, as has been abundantly established by experimental research. He administers the bromids internally, and has a high opinion of the combination of the bromids of potassium, of strontium and of ammonium, in the dose of 1 to 3 gm. to three years of age, and after this age 4 gm. in the twenty-four hours. The bromids diminish reflex excitability and especially that in the epileptogenic zone, and are well tolerated by children. He supplements this treatment by changing the bed and body linen frequently, frequent general baths and daily disinfection of the mouth with a 1 per 1000 solution of potassium permanganate, and especial care for tempting and nourishing food. Cacchiole adds that Mya has found pyridin useful also in cases of nervous asthma.

97. **Guaiacol Salve to Abort Mumps.**—Grande has been successful in aborting epidemic parotitis in his army experience by local application of a 5 per cent. salve of guaiacol rubbed into the region over the parotid glands and scrotum. It occasionally induced a transient eczema in the latter locality, but never elsewhere. The antithermic, analgesic and antiseptic action of guaiacol has been demonstrated by Maragliano, Linossier and others. Lenz and Bocchi have also reported its great efficacy for local application in cases of orchitis and of epididymitis.

98. **Cauterization of Hypertrophied Prostate Through the Rectum.**—Negretto has received a number of communications from various surgeons asking for particulars in regard to his method of cauterizing the enlarged prostate by way of the rectum, with a Paquelin or galvano-cautery, first published in 1895, but improved later. Among the letters received is one from E. Andrews of Chicago, who asks: "Do you seek to penetrate to the center of the gland? How broad is the opening? Is there any shock? etc." In reply Negretto gives a cut of the hook, one centimeter long, which he has devised for the purpose, and describes the details of 11 cases thus operated on. All were completely and permanently cured, except one case in which the prostate was enormously enlarged and indurated, with serious vesical complications. The intervention seems to have a special action on congestion of the gland, and its simplicity, facility and rapid efficacy, with its freedom from danger and its non-interference with the genital organs, com-

mend it, he thinks, for general adoption in cases in which the congestive element predominates. Two days before he gives an oil purgative, followed the next day by a large dose of 8 gm. of bismuth and 8 cg. of opium, and an hour before the operation one or two rectal injections of glycerin. He prefers general anesthesia, but when this is impracticable resorts to an alcoholic solution of chloral and morphin, which enables the operation to be performed with little or no pain. The patient in the position for perineal cystotomy with the pelvis raised high, he dilates with the old model of the Weiss speculum and packs the rectum around the field of operation with gauze. He then removes the speculum and inserts the left forefinger in the rectum, fixing with it the center of the prostate. He then introduces the hook shown in the cut, guided by the finger, and inserts it in the prostate, with slight traction to ensure that it will not slip. He notes on the graduated handle of the

hook the number of centimeters in order to detect at once any change in its position. The hook is then given in charge to an assistant; the speculum is replaced and other strips of gauze applied if necessary to keep all the folds of the rectum out of the way. He then cauterizes with the Paquelin or the galvanocautery all around the hook. He applies the cautery knife flat and cauterizes on a level plane and across. The size and depth of the eschar are proportional to the size of the gland. As a general rule he finds that a rather superficial cauterization is enough to entail the involution of the gland. When the gland is very large, before he withdraws the cautery, he pushes it in until it reaches the point of the hook. The entire operation is complete in two minutes. If necessary, the assistant places his hand on the suprapubic region in order to render the field of operation more prominent. After the intervention another large dose of bismuth and opium is given and a Nelaton catheter is left permanently in the bladder for a few days, when it is changed and the urinary passages systematically disinfected. He gives an oil purgative the sixth to seventh day, and the gauze is evacuated with the alvine discharge. After ten or twelve days the catheter is removed and the patient urinates naturally. He has never had any mishaps or symptoms except that the urine was blood stained in a few cases for a day or so. Three of his patients were 59 years old, six between 67 and 70 and the others 71 and 73. The prostatic troubles were of one to ten years' standing and in some there had been infectious complications. One case is particularly interesting. All the lobes of the prostate were much enlarged and yet cauterization of the middle lobe alone was followed by retrogression of the entire gland, the three lobes sharing in the relief of the congestion. The patient had been operated on for urinary calculi and had been treated later for mucopurulent cystitis. He returned a year later with symptoms of prostatic trouble and the vasa deferentia were resected. The symptoms recurred after a month with others indicating calculi. Six were removed by epicystotomy, at which time the prostate was seen to be much enlarged. A mucopurulent urethritis followed and finally complete retention. Cauterization by way of the rectum as above described, completely freed the patient from all his disturbances and news from him more than a year later confirm his permanent recovery. He works and walks without disturbances, and micturition is voluntary and normal.

104. **Ecchymosis on Dorsum of Foot After Fall on the Feet.**—Fiori has observed four cases of a fall from a height, the subject landing on his feet, which were followed by a large patch of ecchymosis on the dorsum of one or both feet. He found this little point important in one or two medicolegal cases in which the ecchymosis was supposed to be the result of violence instead of trauma.

105. **Ten Splenectomies for Malarial Splenomegalia with Torsion.**—Schwarz reviews the details of his 10 cases and states that there was torsion of the pedicle in 6. This complication renders splenectomy imperative, and he advises it in all cases of pronounced malarial enlargement of the spleen. The extirpated organs weighed from 800 to 3500 gm. All of the patients recovered except one, who succumbed to a peritonitis, commencing the ninth day, and one who was in advanced cachexia when operated and survived two months. One of the patients has had recurrences of malarial attacks at each menstruation, but they vanished during a pregnancy and lactation. Otherwise the patients are all in good health, the blood apparently normal.

106. **Talma's Operation.**—Carini has collected 63 cases of true ascites from cirrhosis of the liver, treated by Talma's operation. Of this number 25 were cured, 7 improved, 9 not affected, and 22 have died, that is, about 40 per cent. were cured. The cirrhotic process is not directly affected and the operation is contraindicated in case of too great depression of the vital forces or if the functions of the liver are seriously compromised or the peritoneum is inflamed. It is equally applicable to cirrhosis with atrophy, simple hypertrophy, biliary hypertrophy and the third stage of Banti's disease. The prospects are better the earlier it is applied.

108. **Treatment of Aneurism.**—Romano has a patient with a large aneurism of the aorta who has been kept in good condition for fifteen years and more. The symptoms subsided under treatment with leeches to the anus, purgatives, saline waters by the mouth and rectal injection. Alcohol and tobacco were forbidden and a light milk and vegetable diet ordered, with sodium iodid to reduce arterial pressure. The local pains were combated with revulsion. As the patient improved he disregarded the directions, with the result that the symptoms of oppression recurred and were very serious on three occasions, but subsided on resumption of the above measures.

111. **Study of Latent Tuberculosis in Tonsils, Etc.**—Tarchetti inoculated 17 guinea-pigs with scraps from the tonsils or vegetations of 14 children affected with ear or glandular disease. None of the animals showed traces of tuberculosis. Dieulafoy reported in 1895 that in a similar series of experiments by him, 13 to 20 per cent. of the animals inoculated succumbed to tubercular infection. He therefore assumed a latent tuberculosis in the tonsils and vegetations of such cases.

112. **Cytodiagnosis.**—Tarchetti has found that the findings supposed to be constant in tuberculosis are encountered in other pleuritic and peritoneal effusions. On the other hand, he found polynuclear white corpuscles and lymphocytes predominating in unmistakably tuberculous effusions.

## Book Notices.

Materia Medica, Therapeutics, Medical Pharmacy, Prescription Writing, and Medical Latin. A Manual for Students and Practitioners. By William Schleif, Ph.G., M.D., Instructor in Pharmacy in the University of Pennsylvania. Series Edited by Bern G. Galladuet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, New York. Second Edition. Revised and Enlarged. Cloth. Pp. 389. Price, $1.75. Philadelphia and New York: Lea Brothers & Co. 1902.

A Text-Book of Histology and Microscopic Anatomy of the Human Body, Including Microscopic Technique. By Dr. Ladislaus Szymonowicz, A.O., Professor of Histology and Embryology in the University of Lemberg. Translated and Edited by John Bruce MacCallum, M.D., Johns Hopkins University, Baltimore. Illustrated with 277 Engravings, Including 57 Plates in Colors and Monochrome. Cloth. Pp. 435. Price, $4.75 net. Philadelphia and New York: Lea Brothers & Co. 1902.

Practical Obstetrics. A Text-Book for Practitioners and Students. By Edward Reynolds, M.D., Visiting Surgeon to the Free Hospital for Women, and Franklin S. Newell, M.D., Assistant in Obstetrics and Gynecology in Harvard University. Illustrated with 252 Engravings and 8 Colored Plates. Cloth. Pp. 553. Price, $3.75 net. Philadelphia and New York: Lea Brothers & Co. 1902.

Disinfection and Disinfectants. A Practical Guide for Sanitarians, Health and Quarantine Officers. By M. J. Rosenau, M.D., Director of the Hygienic Laboratory and Passed Assistant-Surgeon U. S. Public Health and Marine-Hospital Service, Washington, D. C. Illustrated. Cloth. Pp. 353. Price, $2.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

Text-Book of Anatomy. Edited by D. J. Cunningham, F.R.S., M.D. (Edin. et Dubl.), D.Sc., LL.D. (Glasg. et St. And.), D.C.L. (Oxon.), Professor of Anatomy and Chirurgery, Trinity College, Dublin. Illustrated with 824 Wood Engravings from Original Drawings, Many Printed in Colors. Cloth. Pp. 1309. Price, $1.75. New York: The Macmillan Co. 1902.

Development and Evolution, Including Psychophysical Evolution, Evolution by Orthoplasy, and the Theory of Genetic Modes. By James Mark Baldwin, Ph.D. Princeton, D.Sc. Oxon., LL.D. Glasgow, Stuart Professor in Princeton University. Cloth. Pp. 395. Price, $2.60. New York: The Macmillan Co. 1902.

The Force of Mind or the Mental Factor in Medicine. By Alfred T. Schofield, M.D., M.R.C.S., etc., Hon. Physician to Fruedenheim Hospital. Cloth. Pp. 309. Price, $2.00 net. Philadelphia: P. Blakiston's Son & Co. 1902.

Twenty-fifth Annual Report of the Board of Health of the State of New Jersey, and Report of the Bureau of Vital Statistics, 1901. Cloth. Pp. 459. Trenton, N. J.: John L. Murphy Publishing Co. 1902.

## The Public Service.

### Army Changes.

Movements of Army Medical Officers under orders of the Adjutant-General's Office, Washington, D. C., Sept. 18 to 24, 1902, inclusive:

David Baker, lieutenant and asst.-surgeon, member of a promotion board at Fort Leavenworth, Kan.

Joseph T. Clark, captain and asst.-surgeon, to report in person at Washington, D. C., to Major William C. Borden, surgeon, commanding the General Hospital, Washington Barracks, D. C., not later than September 30, for temporary duty in connection with the hospital to be established during the encampment of the G. A. R., and on the completion of this duty to return to his proper station.

Jere B. Clayton, lieutenant and asst.-surgeon, relieved from duty at Fort Myer, Va., to proceed to Fort Riley, Kan., for temporary

duty in connection with the military maneuvers to be held at that post, and on the completion of this duty to proceed to Vancouver Barracks for duty at that post.

H. D. Corbusier, contract surgeon, leave of absence for one month granted.

Thomas Devereux, lieutenant and asst.-surgeon, will proceed from Fort Snelling, Minn., to Fort Riley, Kan., for temporary duty in connection with the military maneuvers to be held at that post, after which he will return to his station at Fort Snelling, Minn.

William J. Enders, contract surgeon, leave of absence for two months granted after October 1.

James D. Glennan, major and surgeon, member of a board at West Point, N. Y., to examine officers of the Army for promotion.

Valery Havard, lieut.-col. and deputy surgeon-general, so much of former orders as requires him to return to his proper station at Fort Monroe, Va., not later than October 15, is amended so as to direct him to proceed to Paris, France, and attend the special maneuvers in connection with troops in the field of the Medical Department of the French Army (Department of Paris), and to return to his proper station not later than October 30.

John Van R. Hoff, lieut.-col. and deputy surgeon-general, is relieved from duty as a member of the Army Medical School. On the completion of his duties with the maneuvers at Fort Riley, Kan., he will proceed to Fort Bayard, N. M., for the purpose of inspecting the General Hospital at that port and thereafter will return to his proper station in Washington, D. C.

James B. Holland, contract surgeon, member of a promotion board at Fort Leavenworth, Kan.

Henry F. Hoyt, major and surgeon, Vols., former orders so amended as to direct him to be honorably discharged, to take effect at Fort Douglas, Utah, October 10, his services being no longer required.

John S. Kulp, captain and asst.-surgeon, U. S. A., detailed a member of an examining board at the Presidio of San Francisco, vice Lieut. Thomas L. Rhoads, asst.-surgeon, relieved.

Louis A. LaGarde, major and surgeon, in addition to his duties as attending surgeon, U. S. Soldiers' Home, Washington, D. C., is detailed a member of the faculty of the Army Medical School, as professor of ophthalmology and skiascopy and lecturer on the duties of medical officers in war and peace.

Francis McCallum, captain and asst.-surgeon, Vols., leave of absence on surgeon's certificate of disability from the Department of California, extended one month.

Harry O. Perley, major and surgeon, member of a promotion board at Jefferson Barracks, Mo.

Allen M. Smith, captain and asst.-surgeon, to report in person in Washington, D. C., to Major W. C. Borden, surgeon, commanding the General Hospital, Washington Barracks, D. C., not later than September 30, for temporary duty in connection with the hospital to be established during the encampment of the Grand Army of the Republic, and on the completion of this duty to return to his proper station.

William Stephenson, major and surgeon, from duty at Fort Mason, Cal., to duty at Camp Monterey, Cal.

Ralph L. Taylor, contract surgeon, leave of absence for one month granted.

Albert E. Truby, lieutenant and asst.-surgeon, member of a board at West Point, N. Y., to examine officers of the Army for promotion.

Francis A. Winter, captain and asst.-surgeon, member of a promotion board at Jefferson Barracks, Mo.

APPOINTMENTS, PROMOTIONS, RETIREMENTS, ETC.,

of commissioned medical officers, recorded in the Adjutant-General's Office, between Aug. 15 and Sept. 15, 1902:

*Regular Army, Appointments.*—Colonel Robert M. O'Reilly, assistant surgeon-general, to be surgeon-general, with the rank of brigadier-general, Sept. 7, 1902.

*Promotions.*—Lieut.-Col. Joseph B. Girard, deputy surgeon-general, to be assistant surgeon-general, with the rank of colonel, Sept. 7, 1902; Major Edward T. Comegys, surgeon, to be deputy surgeon-general, with the rank of lieutenant-colonel, Sept. 7, 1902; Captain Henry D. Snyder, asst.-surgeon, to be surgeon, with the rank of major, Sept. 7, 1902.

*Retirement.*—Brigadier-General William H. Forwood, surgeon-general, Sept. 7, 1902.

*Volunteers, Honorably Discharged.*—Major James S. Wilson, surgeon, Aug. 15, 1902; Major William F. de Niedeman, surgeon, Sept. 11, 1902.

## Navy Changes.

Changes in the Medical Corps of the Navy, week ending September 27:

Medical Director E. S. Bogert, retired, ordered to the Marine Recruiting Rendezvous, New York.

Medical Director N. M. Ferebee, detached from the Naval Hospital, Norfolk, Va., and ordered to the Navy Yard, Washington, D. C.

Medical Director R. C. Persons, detached from the Marine Recruiting Rendezvous, New York, and ordered to the Naval Hospital, Norfolk, Va.

Medical Inspector C. G. Herndon, detached from the Navy Yard, Washington, D. C., and ordered to the Naval Hospital, Yokohama, Japan, sailing from San Francisco, October 22.

Medical Inspector G. E. H. Harmon, detached from the Naval Hospital, Yokohama, Japan, and ordered home to wait orders.

Surgeon G. Pickrell, detached from the Naval Dispensary and Naval Hospital, Washington, D. C., and ordered to the Naval Academy, Annapolis, Md.

Surgeon G. Biddle, detached from recruiting duty in the field, and ordered to the Naval Recruiting Rendezvous, Philadelphia.

P. A. Surgeon J. B. Dennis, detached from the *Brooklyn*, and ordered to the *Detroit*.

P. A. Surgeon W. M. Garton, ordered to the *Columbia*.

Surgeon T. A. Berryhill, ordered to the Navy Yard, Pensacola, Fla.

Medical Director L. G. Heneberger, detached from the *Brooklyn* and ordered to the *Olympia*.

Surgeon H. E. Ames, detached from the *Olympia*, and ordered home and to wait orders.

Asst.-Surgeon T. McC. Lippitt, retired from active service in the Medical Corps of the Navy, by reason of physical disability—gunshot wound—received in action at Pekin, China.

## Marine-Hospital Changes.

Official list of the changes of station and duties of commissioned and non-commissioned officers of the Public Health and Marine-Hospital Service for the seven days ended Sept. 25, 1902:

Assistant Surgeon-General G. T. Vaughan, granted leave of absence for one month from October 1.

Surgeon A. H. Glennan, granted five days' extension of leave of absence from September 22.

Surgeon S. D. Brooks, granted leave of absence for fifteen days from September 27.

P. A. Surgeon J. B. Stoner, to proceed to Washington, D. C., and report to chairman of board of examiners for examination to determine his fitness for promotion to the grade of surgeon.

Asst.-Surgeon L. D. Fricks, relieved from temporary duty at Savannah Quarantine, and directed to proceed to Savannah, Ga., and assume command of station.

Asst.-Surgeon J. W. Kerr, granted leave of absence for two months and fifteen days upon being relieved from duty at Hongkong, China.

A. A. Surgeon G. H. Attree, granted leave of absence for twenty-six days from September 15.

A. A. Surgeon C. W. Bailey, Department letter of Sept. 4, 1902, granting leave of absence, amended so that leave shall be for a period of two days from August 27.

RESIGNATION.

Surgeon T. B. Perry resigned, to take effect Sept. 15, 1902.

BOARDS CONVENED.

Board convened at the Bureau, Washington, D. C., at 10 o'clock a. m., September 20, for the physical examination of an officer of the Revenue Cutter Service. Detail for the Board: Assistant Surgeon-General W. J. Pettus, chairman; Assistant Surgeon-General H. D. Geddings, recorder.

Board convened at the Bureau, Washington, D. C., at 12 o'clock, September 20, for the physical examination of Captain O. S. Willey, R. C. S. Detail for the Board: Assistant Surgeon-General G. T. Vaughan, chairman; Asst.-Surgeon B. S. Warren, recorder.

Board convened at the Bureau, Washington, D. C., at 10 o'clock a. m., September 29, for the examination of P. A. Surgeon J. B. Stoner, to determine his fitness for promotion to the grade of surgeon. Detail for the Board: Assistant Surgeon-General L. L. Williams, chairman; Assistant Surgeon-General W. J. Pettus; Assistant Surgeon-General H. D. Geddings, recorder.

## Health Reports.

The following cases of smallpox, yellow fever, cholera and plague have been reported to the Surgeon-General, Public Health and Marine-Hospital Service, during the week ended Sept. 27, 1902:

SMALLPOX—UNITED STATES.

California: Los Angeles, Sept. 6-13, 7 cases; San Francisco, Sept. 7-14, 5 cases.
Illinois: Chicago, Sept. 13-20, 1 case.
Indiana: Indianapolis, Sept. 6-13, 1 case.
Kansas: Wichita, Sept. 6-13, 1 case.
Kentucky: Covington, Sept. 6-13, 2 cases.
Louisiana: Shreveport, Sept. 13-20, 1 case.
Maryland: Baltimore, Sept. 13-20, 1 case.
Massachusetts: Boston, Sept. 13-20, 18 cases, 1 death.
Michigan: Detroit, Sept. 13-20, 8 cases.
Missouri: St. Louis, Sept. 14-21, 1 case.
New Hampshire: Nashua, Sept. 13-20, 5 cases.
New Jersey: Sept. 13-20, Camden, 2 cases; Newark, 2 cases; Plainfield, 1 death.
New York: New York, Sept. 13-20, 3 cases, 1 death.
Ohio: Cincinnati, Sept. 12-19, 1 case; Cleveland, Sept. 13-20, 86 cases, 7 deaths; Toledo, Sept. 6-13, 8 cases; Youngstown, Sept. 6-13, 1 case, 1 death.
Pennsylvania: Altoona, Sept. 13-20, 3 cases; Johnstown, Sept. 13-20, 17 cases, 3 deaths; McKeesport, Sept. 13-20, 3 cases; Pittsburg, Sept. 13-20, 20 cases, 6 deaths; Philadelphia, Sept. 13-20, 4 cases; Reading, Sept. 15-22, 1 case.
South Carolina: Charleston, Sept. 13-20, 1 case.
Tennessee: Nashville, Sept. 13-20, 1 case.

SMALLPOX—FOREIGN.

Austria: Prague, Aug. 23-30, 3 cases.
Belgium: Aug. 30-Sept. 6, Antwerp, 1 case; Brussels, 1 death; Ghent, 1 death.
Ecuador: Guayaquil, Aug. 23-30, 3 deaths.
France: Paris, Aug. 16-23, 1 case.
Great Britain: Dundee, Aug. 30-Sept. 6, 1 case; Liverpool, Sept. 6-13, 3 cases; London, Aug. 30-Sept. 6, 12 cases, 2 deaths.
India: Bombay, Aug. 19-26, 3 deaths; Calcutta, Aug. 8-23, 2 deaths; Madras, Aug. 9-15, 2 deaths.
Italy: Palermo, Aug. 23-30, 2 cases.
Russia: Moscow, Aug. 16-30, 3 cases, 2 deaths; Odessa, Aug. 30-Sept. 6, 1 case; St. Petersburg, Aug. 16-30, 39 cases, 6 deaths; Warsaw, Aug. 8-23, 5 deaths.

YELLOW FEVER.

Colombia: Panama, Sept. 8-15, 3 cases, 1 death.
Mexico: Coatzacoalcos, Sept. 6-13, 3 cases, 1 death.

CHOLERA—INSULAR.

Philippine Islands: Manila, May 10-Aug. 2, 622 cases, 410 deaths; Provinces, July 19-Aug. 2, 2,141 cases, 1,664 deaths.

CHOLERA—FOREIGN.

China: Amoy, July 26-Aug. 2, 40 cases, estimated; Hongkong, Aug. 2-9, 12 cases, 11 deaths; New Chwang, Aug. 2-16, 160 cases, 142 deaths.
Egypt: Alexandria, Aug. 16-30, 13 cases, 7 deaths.
India: Bombay, Aug. 19-26, 2 deaths; Calcutta, Aug. 8-23, 16 deaths; Karachi, Aug. 10-24, 1 case, 1 death; Madras, Aug. 9-15, 1 death.
Straits Settlements: Singapore, July 26-Aug. 2, 5 deaths.

PLAGUE—FOREIGN.

China: Hongkong, Aug. 2-9, 14 cases, 13 deaths.
Egypt: Alexandria, Aug. 16-30, 7 cases, 4 deaths.
India: Bombay, Aug. 19-26, 35 deaths; Calcutta, Aug. 8-23, 19 deaths; Karachi, Aug. 10-24, 20 cases, 17 deaths; Madras, Aug. 9-15, 2 deaths.